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ABSTRACT

An investigation of techniques used to maximize response rates was the purpose of this study. Variables included perceived threat of questionnaire, questionnaire length, cover letter approach, follow-up correspondence, stamped/unstamped return envelope, and anonymity. The sample comprised 4,608 college faculty. Three analyses of response rates were performed at different points in time. There were no significant differences in response rate for the three levels of questionnaire threat, two lengths (in pages) of questionnaire, two forms of return envelope, or two levels of anonymity. Questionnaires with fewer items were returned more often after the initial mailing. Typed cover letters with a personal appeal elicited higher response rates. Follow-up letters with another questionnaire enclosed increased response rates. On the basis of the data, use of a follow-up letter with another questionnaire enclosed, a typed cover letter with a personal appeal, and inclusion of an unstamped return envelope is recommended. (Author/CK)

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AN EXPERIMENTAL STUDY OF TECHNIQUES TO IMPROVE RESPONSE RATES OF MAILED QUESTIONNAIRES

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Laboratory of Educational Research
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FINAL REPORT

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ABSTRACT

Many educational researchers spend money and time on techniques which they assume will improve return rates in mailed questionnaire surveys. Unfortunately, there is little conclusive evidence that these techniques are effective.

An investigation of techniques used to maximize response rates was the purpose of this study. Variables included perceived threat of questionnaire, questionnaire length, cover letter approach, follow-up correspondence, stamped/unstamped return envelope, and anonymity. The sample comprised 4,608 college faculty.

Three analyses of response rates were performed at different points in time. There were no significant differences in response rate for the three levels of questionnaire threat, two lengths (in pages) of questionnaire, two forms of return envelope, or two levels of anonymity. Questionnaires with fewer items were returned more often after the initial mailing. Typed cover letters with a personal appeal elicited higher response rates. Follow-up letters with another questionnaire enclosed increased response rates.

On the basis of the data, the investigators recommend use of a follow-up letter with another questionnaire enclosed, a typed cover letter with a personal appeal, and inclusion of an unstamped return envelope (if the questionnaire is mailed to offices where respondents could be expected to have free mailing privileges).

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CHAPTER 1

INTRODUCTION TO THE STUDY

For well over one hundred years, questionnaires have been sent by mail to gather information and opinions from both the general public and specialized groups. According to Scott (1961), the first detailed account of a mailed survey appeared in 1838 in the *Journal of the Statistical Society of London* (now the Royal Statistical Society). It concerned a pilot study to determine whether agricultural statistics could be obtained by having each clergyman in the country report those statistics for his parish. Returns were not spectacular -- only 21% -- and the mailed questionnaire was deemed to be an impractical method for research of that type. (Apparently not many persons heeded this warning. Even today, many questionnaire studies are performed and reported where the response rate hovers around 20%, and sometimes even lower.)

The use of mailed questionnaires increased during the remainder of the 19th century. Notable among users of the questionnaire during this time was Francis Galton, who used questionnaires in his study of heredity. He sent a long questionnaire to scientific men in England for the purpose of obtaining an account of their life history in the hope that the data he gathered would, in a general way, show that descendants of eminent men were likely to become eminent themselves (although not necessarily in the same field as that of the ancestor). His results were published in 1874 in *English Men of Science*. In 1883, in *Inquiries into the Human Faculty*, Galton set down four requirements for a questionnaire: (a) the questions must be of a nature that they can be quickly and easily understood; (b) they must permit easy reply; (c) they must cover the topic of inquiry; and (d) they must "tempt the co-respondents to write freely in fuller explanation of their replies and on cognate topics as well . . . These separate letters have proved more instructing and interesting by far than the replies to the set questions [p. 83]." These requirements are not greatly different from suggestions offered by the National Education Association (1930), Phillips (1941), Romine (1948), Robinson and Agisim (1951), and authors of current texts in research methodology (e.g., Barr, Davis, & Johnson, 1953; Hillway, 1969; and Wiersma, 1969).

An advocate of the use of questionnaires in the late 19th and early 20th centuries was the American psychologist, G. S. Hall. Some of the topics of Hall's questionnaire investigations were knowledge and concepts common to children upon entering school, children's fears, and the interrelationship of adolescence, education, and religion. By the time of Hall's death (1924), the mailed questionnaire was the foundation for studies in educational psychology and, indeed, educational research in general. In an editorial in the Pedagogical Seminary in 1894, Hall spoke of increasing empiricism in education: "Our programme is to gradually centre all study of Psychology, Philosophy, Ethics and perhaps other cognate branches about child study. This . . . will save the philosophical side of pedagogy from its present decline, and place education for the first time on a scientific basis and be the centre around which the education of the future will be centred [p. 5]."

Although it was not until the late 1800's that the questionnaire was used for the specific purpose of gathering scientific data about education, questionnaires were used much earlier than this by Horace Mann to help convince the American people of the need for and worth of universal education. Mann admitted that his purpose was twofold: (a) to convince poor people that the education of their children would not result in less income for them, and (b) to convince wealthy people that education for the working class would result in more profits for employers and less worry about labor discipline. His first questionnaire was aimed at this second purpose. It was sent in 1841 to employers in Massachusetts and was an obvious attempt to get the respondents to answer as Mann wished them to answer; his use of the leading question technique was flagrant. For example, one of his questions to employers was:

> ". . . [could there], in your opinion, be any police so vigilant and effective, for the protection of all the rights of property, person, and character, as such a sound and comprehensive education and training as our system of common schools could be made to impart? And would not the payment of a sufficient tax to make such education and training universal be the cheapest means of self-protection and insurance? And in regard to that class which, from the accident of birth and parentage, are subjected to the privations and temptations of poverty, would not such an education open to them new resources in habits of industry and economy, in increased skill, and the awakening of inventive power, which would yield returns a thousand-fold greater than ever can be hoped for from the most successful clandestine depredations, or open invasion of the property of others [Mann, 1891, p. 100]?"

In 1847, Mann utilized the questionnaire again, this time querying certain teachers in Massachusetts about a ". . . subject of great importance to the cause of popular education," the moral effects of good schools.

The use of questionnaires by Mann and others for propaganda purposes notwithstanding, most researchers since that period have made legitimate use of the questionnaire for research in education. A perusal of articles in most education journals reveals a dramatic increase in the number of studies utilizing the questionnaire technique for data collection during the past thirty to forty years. The same trend is evident when one reviews any compilation of doctoral dissertations in education. Thus it can be seen that from the very early years of American public education, questionnaires have been an important research tool for the gathering of data. That situation persists today.

In the remainder of this chapter the following sections are presented: Background to the Problem, Statement of the Problem, Perspective for this Study, Definitions, Objectives, and Questions to be Answered.

Background to the Problem

At present, the mailed questionnaire is one of the most widely used research tools in education (see Borg, 1963, p. 204; Good, 1966, p. 214; Rummel, 1958, p. 87; Travers, 1964, p. 279; Trow, 1967, p. 319). Norman (1948) goes so far as to say that "In all probability, more studies have been made with the questionnaire than with any other instrument in the field of social investigation [p. 235]." This is perhaps because the questionnaire method has certain definite advantages as a research tool. Nonetheless, the questionnaire method is held in disrepute by many eminent researchers, both because of inherent disadvantages in the technique and because of frequent misuse of the technique. As Rummel (1958) stated, "The correspondence method (i.e., mailed questionnaires) has not only been the most popular in extent of usage in research work, but it has also been the most misused method [p. 87]." In the remainder of this section, some of the advantages, disadvantages, and misuses of the mailed questionnaire will be discussed. A possible solution to the most serious problem associated with the mailed questionnaire will then be proposed.

It should be noted that the remarks in the remainder of this section refer to the mailed questionnaire. Other uses of questionnaires are made (e.g., in industrial settings, in university classroom settings) and some of the advantages and disadvantages to be discussed refer to these other uses as well, but it should be kept in mind that the remarks refer specifically to those questionnaires which are sent to respondents through the mail and which are then returned to the investigator through the mail.

Advantages of the Mailed Questionnaire

It cannot be denied that the mailed questionnaire has certain definite advantages as a research method (see Ruckmick, 1930; Phillips, 1941; Sharp, 1955; Benson, 1946). For one thing, it is a relatively easy tool to administer. It has the potential of obtaining valid and reliable answers to some of the most pressing questions in education. It is practically impossible to gather so much data from so many persons by any other technique. It is often possible to gather a large quantity of data with a questionnaire in a fairly short period of time. The scope of the investigation can be very broad.

The cost per usable response is generally lower for the questionnaire than for most other research techniques. (Of course, the cost per usable response has a perfect negative correlation with the percentage of returns in a questionnaire survey: the higher the response rate, the lower the cost per usable return.) The researcher using questionnaires usually does not have to spend time, energy, and money training interviewers or observers (although interviewers may be necessary when conducting a follow-up of of nonrespondents to see if a biased sample might have responded to the questionnaire). The "questionnaire researcher" generally does not need to be concerned with inter-interviewer or inter-observer variability, a condition which calls into question the validity of many studies where respondents are personally contacted by more than one investigator. If the items in a questionnaire are worded carefully enough to avoid ambiguity, and if they are constructed with the thought of easy tabulation in mind, processing data for analysis can be as easy as for any other data-gathering technique.

There are times when an investigator needs to determine attitudes of groups or units of persons (e.g., a family). In such a case, a questionnaire mailed to the home may provide a more valid response than an interviewer asking one member of the unit to make a response for the whole group.

Problems of the Mailed Questionnaire

Problems associated with the use of the mailed questionnaire may be divided in two groups: Problems (or disadvantages) inherent in the technique itself, and misuses (or abuses) of the technique (see Ruckmick, 1930; Phillips, 1941; Benson, 1946; Lehman, 1963). Inherent disadvantages will be described first.

Responding to a questionnaire (or, indeed, constructing a good questionnaire) can be a time-consuming activity. Respondents may provide inaccurate replies to questions as a result of a lack of interest in or knowledge of the topic. Carelessness, haste in reporting, or unwillingness to expend energy in obtaining precise information to answer questions also result in inaccuracies. The researcher cannot always be certain that every question is interpreted in the same way by every respondent, or indeed in the way he intended the question to be interpreted. In fact, with mailed questionnaires he cannot be certain that it was the intended respondent who completed and returned the form.

Referring to the items themselves in a questionnaire, in many cases they require explicit questions which the respondent may find difficult to answer. As Ruckmick says,

> ". . . the deeper one goes into one's subject and the more one really knows about his science, the more difficult it becomes to give . . . specific answers . . . We have therefore a curious paradox. If the person who replies [to a questionnaire] is an expert, the chances are that he will refuse to be explicit or categorical in his answer; if on the other hand the respondent is quite immature, he can afford to be and will very likely be explicit and categorical in his answer, but the information may be wholly untrustworthy [Ruckmick, 1930, pp. 35-36]."

The same phenomenon may arise when questions are cast in a forced choice format and ask for opinions. The respondent may not agree with the anchors given to the points on a continuum (as in a Likert-type item) or may not feel he is able to give an unequivocal "yes" or "no" without some further qualification.

Probably the most serious disadvantage of the mailed questionnaire is the problem of nonresponse. Even if the questionnaire is mailed to a random sample of the population to which one wishes to generalize, the investigator cannot be sure that he has received replies from a representative subsample unless he has virtually 100% of the questionnaires returned to him. In other words, if less than 100% of the questionnaires are returned, members of the random sample are lost and the returns cannot be treated as a random sample of the population. Since the validity of the results is dependent in part on the assumption that there has been no selection factor operating among the respondents (i.e., there has been no systematic exclusion or inclusion of persons in their tendency to respond), it is imperative to have a representative group of respondents if one is to generalize the findings to the particular population in question.

Although these inherent disadvantages may be enough in themselves to turn the researcher away from the mailed questionnaire technique, there are numerous abuses of the method which cause it to be held in further disrepute. There has rightly been much criticism of questionnaires developed by inexperienced or careless persons. Some of the major criticisms of such questionnaires include the following: (a) they deal with topics of little significance, (b) they are overly long because of questions seeking trivial information or information which can be obtained from other sources, (c) the form of the questions or the instructions for answering the questions may suggest the answers which the researcher wants to hear, (d) questions are often ambiguous, and (e) in forced choice questions, a good range of alternative answers is not provided.

Just as the most serious inherent disadvantage of the questionnaire technique is the problem of nonresponse, so it also leads to one of the most frequent and most serious abuses of the method. Since the results of a questionnaire study are valid for the population to which it has been administered (via the sample) only to the extent that the replies received from respondents are representative of that total group, the problem of nonresponse is a critical one. Worse, many researchers ignore this problem and fail to determine whether or not there are important differences in characteristics of the respondents and nonrespondents. They thus fail to identify possible biases which might have developed in the data as a result of unreturned questionnaires. If researchers followed up nonrespondents in their surveys to see if the respondents were similar or different on important variables which might affect their tendency to respond, then much of the problem of indeterminate error caused by a less than 100% return would be mitigated. Unfortunately, it is the rare researcher who conducts a nonrespondent bias check.

It is not simply that many researchers fail to recognize the import of a selection bias in questionnaire research. Regrettably, it is often not feasible to follow up nonrespondents. Obtaining information about nonrespondents from anyone but the nonrespondents themselves is costly in time and money; furthermore, there is often no way at all to obtain relevant information from nonrespondents unless they will respond to a request for new information -- an event which is usually unlikely in view of their earlier failure (or refusal) to respond.

If the mailed questionnaire is to be an adequate research method in the field of education, a solution to the problem of nonresponse must be found. Two possible solutions are proposed in the next section.

Possible Solutions to the Problem of Nonresponse

For the mailed questionnaire to be more accepted as an adequate research method, it seems clear that one of two (or both) solutions to the problem of nonresponse must be found. Either ways must be found to conduct more adequate nonrespondent bias checks, or techniques must be developed which will increase to the greatest possible extent the return rate of mailed questionnaires. Of the two solutions, it seems obvious that increasing the return rate is the more desirable. Not only is it likely to be more feasible than conducting difficult and costly nonrespondent bias checks, but also an adequate rate of return would obviate conducting any nonrespondent bias check at all.

Unfortunately, educational researchers are lacking in knowledge of how to increase return rates (Trow, 1967; Sieber, 1968). Although as indicated earlier, many researchers make no conscious, determined effort to increase response rates, others who are cognizant of the necessity of a high rate of return do spend a great deal of money and time on techniques which they assume will improve return rates. There is little conclusive evidence, however, that any of the techniques employed are effective; the persistent low rate of returns in educational research surveys (see Travers, 1964, p. 297) suggests strongly that current attempts to increase return rates may be accomplishing little or nothing. Examples of techniques which educational researchers have used include (a) personalizing the correspondence to respondents (in the form of a typewritten rather than a printed cover letter or a personal rather than a facsimile signature), (b) providing incentives to respondents (e.g., money, stamped return envelope, summary of results of the study), (c) keeping the length of the questionnaire as short as possible, and (d) sending preliminary letters to respondents to inform them that they will soon be receiving a questionnaire.

Research has been done in the past where several of these techniques have been examined to see if they are effective in increasing response rates. However, most of the studies which have been done on techniques for achieving high response rates with mailed questionnaires have been sidelights to the main problems under investigation. That is, most researchers have been primarily concerned with achieving a high response to their questionnaire as cheaply as possible, and there has been little latitude to experiment with different techniques, some of which might drastically reduce the response rate. Of the few "pure" research studies on the mailed questionnaire method, most researchers have investigated the techniques singly; little has been done to see which combinations of techniques are most effective in increasing response rates but are still economical in terms of time and money. Such a systematic investigation of techniques for increasing response rates would produce critically needed knowledge to help solve the researcher's dilemma in choosing among alternative combinations of techniques and strategies. Such a systematic investigation is the topic of this study.

Statement of the Problem

Clearly, the mailed questionnaire has certain definite advantages as a data-gathering technique. Even though it is one of the most widely used research tools in education, however, it usually suffers as a research technique from failure to obtain a sufficient proportion of returns so that valid conclusions may be drawn from the analysis of returned questionnaires. Some educational researchers spend a great deal of money and time on techniques which they assume will improve return rates. Unfortunately, there is no conclusive evidence that any of the techniques employed are effective; the persistent low rate of returns in educational research surveys suggests strongly that current attempts to increase return rates may be accomplishing little or nothing.

Previous research on several techniques for improving return rates has not yielded conclusive or useful results. A systematic investigation of techniques for improving response rates to generate badly needed knowledge in this area is the purpose of this study. Specifically, the purpose of this research is to investigate in an experimental study several common techniques used to increase response rates in mailed questionnaire surveys to determine their relative effectiveness, singly and in combination, in increasing the response rates of mailed questionnaires.

Perspective for this Study

One might begin a study of ways to improve response rates to mailed questionnaires by asking a prior question: "What causes low returns?" One can look for answers in two sets of factors: factors related to the questionnaire and factors related to the respondent.

Many of the factors related to the questionnaire which contribute to a low rate of returns have already been mentioned in the section on "Problems of the Mailed Questionnaire." For one thing, the questionnaire may be a poorly constructed instrument. It may be too long, have ambiguous items, or have complicated or unclear directions. If it is a closed-ended questionnaire, the alternative answers may not match the question. There are many technical points on which a questionnaire may be judged, and if found inadequate in very many of these areas, response rates will likely suffer.

The nature of the information requested in the questionnaire may also cause low return rates. It may be of a trivial nature. It may be readily available from sources other than the respondent, if the investigator would only take the time to look for it. The questionnaire may ask for information that would take the respondent an inordinately long time to gather and report. Consequently, even if the questionnaire is a well-constructed instrument, there are possible problems with the task that is requested of the respondent which may contribute to a low response rate.

Not all the causes for low returns in a mailed questionnaire survey can be traced to the instrument, however. There is evidence to support the belief that certain persons simply are unlikely to return a completed questionnaire. A body of literature has grown around research aimed at discovering differences between respondents and nonrespondents. Characteristics of the "typical" respondent and nonrespondent are not the topic of the present study, however, and for that reason that body of knowledge will not be discussed here except as it relates to motivation of the respondent for responding or not responding.

The motivation of the potential respondent is a critical factor. The knowledgeable researcher who wants to use a mailed questionnaire will try to interest and involve the respondent in the topic of his study, on the assumption that if a person is interested in the study he will more likely cooperate in it by completing and returning the questionnaire (see Toops, 1935, pp. 212-213).

There are many different motives persons may have for responding to a mailed questionnaire. Appeals have been directed by researchers in the past to a variety of these motives, including the following: (a) the respondent's scientific interest ("When the study is completed, we will send you a summary of the results."); (b) the respondent's sense of responsibility or professionalism ("It is important to the profession that we gain this knowledge."); (c) the respondent's perception that he or his response is important ("Your response is critical to the successful completion of our study."); (d) the respondent's willingness to respond to a request for help ("I need your help; without it I cannot complete my dissertation."); (e) the respondent's sense of security in responding ("Your reply will be held in strict confidence; only group statistics will be reported."); (f) the respondent's financial motives ("Each respondent who completes and returns the questionnaire will be paid $5.00."); (g) the respondent's guilt feelings ("To date, we have not received your completed questionnaire; therefore we are enclosing another stamped return envelope and questionnaire."); and (h) the respondent's perception that his task is an easy one ("The enclosed questionnaire will take only ten minutes to complete.").

Even though many reasons have been suggested as possible causes for low returns in mailed questionnaire surveys (e.g., poor questionnaire construction, characteristics of the respondents), only one possible cause -- motivation of the respondent -- was investigated in the present study. Rather than working exclusively with one type of motive, the study described here was designed to sample across motives to determine which techniques are most effective in getting a respondent to complete and return a questionnaire. Hopefully, through methods such as field testing of the questionnaire prior to mailing and selection of a relatively homogeneous sample, the effect of other possible causes for low returns was diminished; and the differences which can be seen in return rates in fact resulted from manipulation of the motivation factor.

Although numerous variables might have been selected for inclusion in this study, feasibility constraints[1] necessitated the inclusion of only six variables. The following variables were selected as important variables representative of classes of techniques which are available for increasing response rates. Beside each variable in Table 1, a check mark in a column (or columns) indicates the motives listed above to which the variable is believed to be primarily related. Specifically, the variables included in this study are as follows:

TABLE 1

Variables Tested in Study and Motives They Represent

	Motives							
Variable	respondent's scientific interest	respondent's sense of responsibility/professionalism	respondent's perception that he or his response is important	respondent's willingness to respond to request for help	respondent's sense of security in responding	respondent's financial motives	respondent's guilt feelings	respondent's ease in responding
1. perceived threat level of questionnaire content[2]					x			
2. length and format of questionnaire								x
3. cover letter	x	x	x	x	x			
4. return envelope						x	x	
5. follow-up correspondence							x	
6. anonymity					x			

---

[1] Such constraints were, for example, the additional costs associated with sending questionnaires to a larger sample required if additional variables were included, and computer program constraints.

[2] It has been hypothesized that the more threatened a respondent feels by a questionnaire which he receives, the less likely he is to complete and return it. This variable, then, was chosen to reflect representative levels

The levels corresponding to each of the above variables are as follows:

1. perceived threat level of questionnaire content
   - a. low threat
   - b. moderate threat
   - c. high threat
2. length and format of questionnaire
   - a. one page (both sides)
     - (1) 20 items
     - (2) 40 items
   - b. three pages (one side only)
     - (1) 20 items
     - (2) 40 items
3. cover letter
   - a. typed
     - (1) professional appeal[3]
     - (2) personal appeal[3]
   - b. form
     - (1) professional appeal[3]
     - (2) personal appeal[3]
4. return envelope
   - a. stamped
   - b. not stamped
5. follow-up correspondence
   - a. none
   - b. postcard
   - c. letter with second questionnaire enclosed
6. anonymity
   - a. assured
   - b. not assured

---

of perceived threat inherent in questionnaire content in typical educational surveys. The interest in investigating this variable in the present study was twofold. First, does the perceived threat of the questionnaire content itself have an effect on the return rate (e.g., is one type of content sufficiently more threatening than that of other types to affect return rates)? Second, do single techniques or combinations of techniques affect the return rate differentially across topics which represent different levels of threat? To answer these questions, three types of content were developed; they might be viewed as three points on a continuum called "perceived threat to the respondent." Further specification of the content types will be given in Chapter 3.

[3] These terms will be defined in Chapter 3.

Definitions

In the interest of clarity of communication, it should be noted that "response rate" and "return rate" are used interchangeably in this study. Similarly, for the purpose of this study, "techniques for improving (or increasing or maximizing) response rates," "variables," and "factors" are synonymous. As mentioned earlier in this chapter, the term "questionnaire" as used in this study refers to mailed questionnaire surveys -- i.e., paper and pencil instruments sent to potential respondents by mail and returned by the respondents to the investigator by mail.

Objectives

The major objective of this research is to determine which techniques of those selected for study are most effective in increasing response rates to mailed questionnaires. In order to attain this objective, several sub-objectives must be reached. These are listed below.

1. To determine the costs, both in time and money, of selected techniques for increasing response rates to mailed questionnaires.

2. To determine which single techniques for increasing response rates to mailed questionnaires are most effective.

3. To determine which combinations of selected techniques for increasing response rates to mailed questionnaires are most effective.

Questions to be Answered

The objective and sub-objectives listed above lead to several questions. The questions posed for the present study are listed below.

1. Which single techniques for increasing response rates are most effective?

    a. Is there a significant increase in response rates when the questionnaire is limited to one page?

    b. Is there a significant increase in response rates when the questionnaire has fewer (e.g., 20) items?

    c. Is there a significant increase in response rates when the cover letter is typed?

    d. Is there a significant difference in response rates depending on whether the appeal of the cover letter is professional or personal?

    e. Is there a significant increase in response rates when a stamped return envelope is enclosed?

    f. Is there a significant increase in response rates when follow-up correspondence is in the form of a letter with a second questionnaire enclosed?

    g. Is there a significant increase in response rates when the anonymity of the respondent is assured?

2. Do these selected techniques for maximizing response rates have differing effects depending on the perceived threat level of the questionnaire?

3. What is the relative cost of each of the selected techniques?

4. Are there certain combinations of techniques which are more effective and economical in increasing response rates?

CHAPTER 2

REVIEW OF RELATED RESEARCH

In 1961, Scott published a review of research related to the mailed questionnaire. His list of references, intended to be an exhaustive list of published articles, papers, and reports directly relevant to the mail survey technique, numbered 121. A further search[1] by the present investigators located approximately 70 additional articles pertaining to the subject which were not included in Scott's review. However, of the total of 191 references thus located, it was found that many were not research reports but dealt instead with treatises on how to use mailed surveys. Of those which were research reports, many did not deal directly with the topic of this investigation -- assessment of the effectiveness and/or cost of various techniques for increasing response rates in mailed questionnaire studies. Therefore, criteria were developed to judge articles for inclusion in or exclusion from this review.

The criteria chosen included the following. First, the study had to focus at least in part on assessing the effectiveness of one or more techniques for increasing response rates in mailed surveys. Second, the study had to compare such techniques either with one another (e.g., frank vs. stamp on return envelope) or with a control treatment (e.g., follow-up letter vs. no follow-up). Because of these criteria, the numerous articles which described mailed questionnaire surveys and the techniques used to attain high response rates in those surveys were excluded from this review unless one or more of the techniques were tested against alternative techniques or a control. Similarly, position statements were excluded from this review because they did not compare techniques; rather, they simply gave the author's opinion as to what techniques should produce a high response rate.

Third, the study had to be focused on techniques used to elicit high response rates. For this reason, studies about questionnaire reliability and validity were excluded. Also, the many studies which compared questionnaire respondents with nonrespondents were not included because their main focus was on description of the persons, not on techniques for increasing response rates.

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[1] Search procedures used to identify relevant studies included use of the following library reference tools and literature search services: *Psychological Abstracts*, all issues through June, 1972; *Sociological Abstracts*, all issues through June, 1972; ERIC Research in Education, all issues through June, 1972; *Current Index to Journals in Education*, all issues through June, 1972; *Education Index*, 1950-1968; and DATRIX Reference Service (all dissertations through 1971).

The final criterion involved the eight motives described in Chapter 1 (in the "Perspective for this Study" section). These motives were discussed earlier as possible causes for persons responding (or not responding) to a mailed questionnaire. The reasoning was that if a researcher employs techniques which take into account these motives, he will achieve a higher response rate than if he had not been cognizant of them.

Each of the variables investigated in the present study is related to at least one of these eight motives.[2] Similarly, each of the studies reviewed in this chapter, in the opinion of the investigators, is related to at least one of the eight motives. It should be noted that some studies include additional variables which were not tested in the present study but which were believed to be representative of at least one of the eight motives.

One caution should be given. Although the majority of the studies reviewed here deal with the mailed questionnaire, a few studies used the questionnaire with an assembled group of respondents (e.g., students in a college classroom). While the results of these studies may not be generalizable to mailed questionnaires, the investigators chose to include them in the hope that they would serve as bases from which more research might be undertaken to see if the results are replicable when the techniques discussed are used with the mailed questionnaire.

Application of the criteria outlined above resulted in 42 studies being included in this review.

The remainder of this chapter is organized into eight sections, each section corresponding to one of the eight motives described in Chapter 1. Within each section, studies are presented by variable; that is, if a motive is represented by more than one variable, all the studies relating to one variable are described before going on to other variables. Within variables, studies are organized chronologically. The first time a study is mentioned, a description of the methods and procedures used in the research is given. If the study is referred to again, however, only the results relevant to the particular topic under discussion are reviewed.

The organization used in this review is intended to allow as much integration of the literature as possible under various categories of response motivation. However, there seems to be a lack of programmatic research on mailed questionnaires, and the literature in some cases almost defies synthesis. Of the 191 articles reviewed for possible inclusion in this chapter, fewer than 10 reported the results of replication studies or were related to one another in any true programmatic sense. Although numerous studies ostensibly were designed to investigate the same variable, in actuality the variable was manipulated in a slightly different way in almost every study. Despite such problems, it is hoped that this review will result in meaningful generalizations about the relative effectiveness of various techniques for use with mailed questionnaires.

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[2] The reader is referred to Table 1 on p. 9 in Chapter 1 to see how the variables in this study were believed to relate to and be representative of these categories of motives.

A description and critique of each study is included in this review, along with a discussion of how the article relates to the present study in instances when the relationship is not immediately obvious.

The eight motives which serve as the basis for the remaining sections in this chapter are listed below, along with a list of the variables included in this review which correspond to those motives.

Motive	Variable
1. respondent's scientific interest	1. cover letter appeal*[3]
2. respondent's sense of responsibility/professionalism	1. cover letter appeal* 2. questionnaire sponsorship
3. respondent's perception that he or his response is important.	1. stamp on outgoing envelope 2. typed vs. form letter* 3. cover letter appeal*
4. respondent's willingness to respond to request for help	1. cover letter appeal*
5. respondent's sense of security in responding	1. typed vs. form letter* 2. anonymity*
6. respondent's financial motives	1. stamp on return envelope* 2. monetary incentive 3. other incentives
7. respondent's guilt feelings	1. stamp on return envelope* 2. stamp on outgoing envelope 3. follow-up*
8. respondent's ease in responding	1. questionnaire length* 2. questionnaire format* 3. simple task

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[3] Those variables marked with an asterisk are included in the present study.

Respondent's Scientific Interest

The only variable judged to relate to this motive was the appeal used in the cover letter. Only two comparative studies were identified as being relevant to this section.

Hammond (1959) conducted a study to determine the relationship between death rate and amount of smoke inhalation during smoking. Two tests were reported, one with a nationwide random sample of 1977 males and the other with a nationwide random sample of 4015 males. In the first test, half of the sample of 1977 received a cover letter from the American Cancer Society (ACS). In the letter, the actual purpose of the study (i.e., relationship between death rate and inhalation) was given. The other half received a cover letter from the Yale Statistical Laboratory stating that the purpose of the study was to discover the relationship between tobacco sales and advertising. The response rate from the first half of the sample was 27.6%, and from the second half, 40%, after the initial mailing. No tests of significance were performed, although with over five hundred persons in the groups, such tests seem almost superfluous. The difference in response rates was assessed by the present investigators and found to be highly significant ($p < .001$).[4]

In Hammond's second test, the sample was divided into three groups. Two of the groups received an identical letter from the American Cancer Society (the difference between the two groups involved the enclosure of different return envelopes), which included no mention of cancer or health. The third group received the same letter from the Yale Statistical Laboratory as had been used in the first test.

The only comparison of relevance to the motive of the respondent's scientific interest is the comparison of the response rate to the American Cancer Society letter in the first test with the response rate to the first of the two ACS letters in the second test; these two letters had the same type of return envelope enclosed with the questionnaire. The first letter (which stated it was a study of the relationship between smoking and cancer) achieved a response rate of 27.6% and the second (which made no mention of health or cancer) a response rate of 33.3%. This difference was significant at the .008 level. It is possible that the respondent's scientific interest might work against his returning the questionnaire in this case. Perhaps the smoker does not wish to be reminded that his chances for cancer are increased by his smoking, and therefore avoids responding to such questionnaires. The other request, although it was from the American Cancer Society, may have seemed innocuous enough not to arouse the respondent's suspicions. (An alternative hypothesis might be that the respondents' scientific interest caused them to respond to both questionnaires because of the ACS sponsorship, but the difference in response rates was due to the threat implicit in the content of the first letter.)

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[4] A standard chi square test was used in this and subsequent analyses conducted by the present investigators in instances where tests of significance would have been appropriate but were not conducted by the investigators. Yates' correction was employed in the chi square tests when expected cell frequencies were less than 10.

Another relevant study was the one reported by Linsky (1965). Linsky sent a questionnaire to a random sample of 912 members of a statewide nurses association. The 912 members of the sample were randomly assigned to 16 groups. Each of the 16 groups received a different cover letter with the questionnaire. Four factors in the cover letter were manipulated; they were varied systematically in a completely crossed factorial design so that 16 combinations of the four variables resulted. The four factors included in the cover letter were: (a) a handwritten salutation and signature, (b) an argument for the importance or social utility of the research, (c) an explanation of the place and importance of the respondent in the study, and (d) an appeal to help those persons conducting the study. Of these, the second factor seems likely to appeal to the respondent's scientific interest. At the pre-established cut-off date (three weeks after the initial mailing), 36.2% of the total sample had returned a questionnaire; the return rates for the 16 groups ranged from 24.6% to 56.1%. Factors a (with a response rate of 40.4%) and c (with a response rate of 42.5%) produced significantly higher response rates ($p < .01$ and .001, respectively, in a one-tailed test). It is unclear from the article whether a directional hypothesis was warranted in this case; however, the $\underline{z}$ scores obtained in the analysis were sufficiently large to warrant the rejection of the null hypothesis at the .01 level even if the test had been two-tailed. (The statistical technique used in this study was based on Goodman's Modification of the Dorn-Stouffer-Tibbits method for testing the significance of comparisons in sociological data.[5])

If, indeed, the words used in the cover letters were valid representatives of the four factors listed, then it appears that an appeal to the respondent's scientific interest does not produce a particularly high response rate, at least among nurses. One would assume that nurses, being a part of the scientific community of medicine, would be interested in furthering the knowledge base in their profession, so it is difficult to understand why an appeal to their scientific interest would not produce good response rates. No description of the questionnaire is given in the article, but it is conceivable that if the instrument did not appear to be about an important topic -- i.e., if it did not have face validity -- the appeal in the cover letter about the study's social utility would have little effect. Thus, any conclusion that an appeal to the respondent's scientific interest is not productive of high response rates would be premature until it can be shown that such is the case for a study on a topic known to be viewed as important by the respondents.

The present investigators do not really know if the topics used in the present study are important to nationwide faculty members. However, an attempt was made to determine how interesting the questionnaires were to a sample of faculty members. The results of that substudy are presented in Chapter 3. While it is not argued that interest is the same thing as importance, it is believed that if respondents consider a topic to be of importance, they will more likely find it interesting and so the check performed here may be an indirect measure of the questionnaires' importance. The results of the present study may, therefore, shed more light on the question of whether an appeal to the respondent's scientific interest will result in a higher response rate.

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[5] L. A. Goodman. Modifications of the Dorn-Stouffer-Tibbits Method for testing the significance of comparisons in sociological data. American Journal of Sociology, 1961, 66, 355-363.

Summary of Research on Appeals to the Respondent's Scientific Interest

Neither of the studies reported in this section give particular strength to the belief that if an investigator appeals to the respondent's scientific interest, the respondent will be more inclined to complete and return a questionnaire. In the Hammond study, however, the nature of the sample would not be expected to be more interested in research pursuits than the average "man on the street," and in the Linsky study it would be impossible to reject the hypothesis without knowing the topic of the questionnaire. The present study will, therefore, help to give a more definitive answer to the question, since the sample consists of persons one would expect to have an above average scientific interest and the importance of the questionnaires will have been measured (albeit indirectly).

Respondent's Sense of Responsibility/Professionalism

The two variables included in this section are cover letter appeal and questionnaire sponsorship.

Cover Letter Appeal

No relevant studies were discovered in the literature search. The present study, however, should provide some answers to the question of whether or not an appeal to the respondent's sense of responsibility or professionalism will result in a higher response rate, since one of the cover letters (which employed the "professional" appeal[6]) combines this motive with the preceding motive, respondent's scientific interest.

Questionnaire Sponsorship

It is conceivable that a respondent would feel more or less obliged to complete and return a questionnaire depending on who its sponsor was. For example, if he was a member of a professional association he might feel more of a responsibility to fill out a questionnaire sent to him by that association than if it had been sent by an individual or another organization of which he was not a member. Several investigators have looked at this factor of questionnaire sponsorship; those studies are reported below.

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[6] This term will be defined in Chapter 3.

The National Education Association (1930) reported the results of a study designed to determine the number and characteristics of questionnaires sent to school district superintendents during two school years, 1927-28 and 1928-29. School districts chosen to cooperate in this study were representative of geography and district size, but they were not chosen randomly. Fourteen superintendents of state, city, and county school districts (a different 14 each year) sent a notice to the National Education Association (NEA) anytime during the school year when a questionnaire was received by their office. The NEA then contacted the investigator who had sent the questionnaire and, after explaining the purpose of the request, requested a copy of the instrument. At the end of the 1927-28 school year, the investigators who had responded to the first request were contacted again. This time they were asked for information concerning the number of questionnaires mailed, the number of replies received, and the manner of tabulation and dissemination of results.

Of the 740 questionnaires reported during the two years, the NEA included 532 in their analyses. Some of the 208 other questionnaires were not sent to the NEA by their authors; others were discarded by the NEA because an incomplete copy of the instrument had been sent; still others were discarded because they were not questionnaires in the true sense but merely requests for available material; and, finally, some were excluded because they were of the nature of a regular periodic report required by the state department of education. The NEA authors admit that selection may not have been random; probably the more poorly prepared questionnaires were not sent to the NEA in the first place.

Of the 532 questionnaires available for analysis, 267 were from the 1927-28 school year. One hundred thirty-six of the 267 investigators responded to the NEA's second request, the request for information on the return rate. It seems probable that, on the average, the 136 response rates reported were higher than the 131 not reported. That possibility should be kept in mind when interpreting the results.

The overall response rate of the 136 questionnaires was 69%. This ranged from an average response rate of 58% when the investigator was a private association or foundation to an average of 75.4% when the investigator was a city superintendent or member of his staff. Nine questionnaires in a "Miscellaneous" category had an average response rate of 78.5%, but the type of investigations in this category was unspecified. The fact that city superintendents achieved a good response rate would seem to corroborate the belief that the respondents felt more of a responsibility to respond to questionnaires from persons viewed as colleagues in the same profession. The low response rate achieved by private associations does not negate the hypothesis, since it is not known which associations or foundations sent the questionnaires and it is therefore impossible to assess the membership status of superintendents in those associations. If the respondents did not hold membership in the associations, then there would seem little reason to expect a high response rate. In the absence of such data, one can only speculate that the sponsoring organizations were ones to which the respondents felt no particular professional loyalty. The NEA does report, however, that ". . . an examination of the detailed distribution of replies [not reported in the article] shows that the percentage of reply received depends more upon other factors than upon the originator [NEA, 1930, p. 34]." It would have been interesting to know what those other factors were. Although other variables are presented, no mention is made of the configuration of factors which account for higher or lower response rates.

Scott (1961) reported that

> "Watson (1937), using a questionnaire sent to housewives (subject not stated), obtained a response of 29 per cent. with an accompanying letter headed from the Cooking Research Bureau, but 22 per cent. when the same letter was headed with a private address. . . . the difference was significant [Scott, 1961, p. 170]."[7]

This would tend to corroborate the belief that persons are more apt to return a questionnaire if it is sponsored by an official (or what appears to be an official) source.

Scott (1961) also reported that

> "Filipello, Berg, and Webb (1958), in an attempt to recruit by mail a panel for wine tasting, found a significant drop in response, from 59 per cent. to 49 per cent., when the University of California was replaced as sponsor by the Wine Advisory Board, a trade organization [Scott, 1961, p. 170]."

It is not clear if this was, in fact, a true mailed questionnaire. If it was, the results are ambiguous. If the persons to whom the letter was sent knew that the Wine Advisory Board was a trade organization, then the lower response rate perhaps can be explained by the hypothesis that the respondents felt under no obligation to comply with their request. Why they would feel more of a responsibility to cooperate with a university is unclear, however. Without knowing who the respondents were, one cannot even guess as to why that letter evoked a higher response rate.

Hammond (1959), in a study described earlier, used cover letters sent by two different organizations, the American Cancer Society and the Yale Statistical Laboratory. Unfortunately, it would be difficult to separate the effect of the content of the letters in this case from the effect of sponsorship; therefore, no interpretation can be offered for the fact that the Yale group achieved a higher response rate.

Roeher (1963) described a study he undertook to discover attitudes toward the physically handicapped. His sample consisted of 400 persons chosen randomly from all those who had contributed to a Saskatchewan-wide appeal for funds for disabled persons. The cover letter sent with the questionnaire was personally typed on plain paper (no letterhead) and stressed the respondent's importance. All factors in the mailing were kept constant except the signature on the cover letter. In one-fourth of the letters, there was no title after the signature; in the other three-fourths, "Director of Rehabilitation" was included after the signature. Of those persons who received a letter with no identifying title, 55% responded; of those who received a letter from the "Director of Rehabilitation," 81% responded. Roeher did not report any test of significance on this difference of 26%; the present investigators performed a chi square test, however, and found the difference to be significant at the .001 level. Since the only difference in the two subgroups in the sample was the inclusion or exclusion of a title after the name of the person sending the questionnaire, these results seem to provide evidence that at least knowing who the sponsor of a study is does make a difference in response rates.

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[7] The study by Watson, and several other studies reported later in this chapter, were reviewed by Scott (1961) but were unavailable from the libraries to which the present investigators had access. Therefore, Scott's article was used as the secondary source of information on those studies.

Scott (1961) reported the result of a survey of the British general adult population in which a questionnaire on radio and television programs was used only to determine whether respondents would address by hand the return envelope. In this survey, ". . . government sponsorship brought a small but definite advantage in the ultimate response [Scott, 1961, p. 169]." Returns were 93.3% for government sponsorship, 90.1% for commercial sponsorship, and 88.7% for university sponsorship. Scott noted, however, that because of unique interactions between sponsorship and follow-up (e.g., members of the sample were probably surprised to find that the government cared enough about their response to send a follow-up), extrapolation of these results to other studies was risky.

Summary of Research on Appeals to the Respondent's Sense of Responsibility/Professionalism

Again, the results presented in this section are ambiguous. The strongest support of the hypothesis that respondents will be more willing to complete a questionnaire if they feel a sense of responsibility is presented by Roeher. In all the other studies, either confounding variables or a lack of specific knowledge about the study prevent one from placing too much confidence in the results reported. The present study did not include the factor of questionnaire sponsorship. However, one of the cover letters in the present study was written to test whether appealing to the respondent's sense of responsibility or professionalism would increase response rate. Those results appear later in this report.

Respondent's Perception that He or His Response is Important

The variables included under this motive are stamp on outgoing envelope, typed vs. form cover letter, and cover letter appeal.

Stamp on Outgoing Envelope

This variable is included here since persons who are aware that the investigator considers responses important enough to send questionnaires by a more expensive postal rate are thought to be more likely to comply with his request to complete and return the questionnaire.

In a survey of veterans regarding a military life insurance program, Clausen and Ford (1947) reported that they achieved a higher response rate when a follow-up letter was sent by special delivery. Only 23% of the sample responded to the initial mailing and the nonrespondents were divided into five groups. Four of the groups received letters with varying degrees of personalization, all of which were sent in franked envelopes. The fifth group received a letter with the same degree of personalization as one of the first four groups; however, it was sent by special delivery. The response rate for the first four groups averaged around 36% (no individual percentages were given and no significant differences were found among the four groups), but for the fifth group it was 61%. No tests of significance were performed, and since sample sizes were not given, it would be impossible to be certain that this observed difference was a true difference; however, the likelihood is high that it was significant, unless the samples were very small.

Phillips (1951) also studied the effect of a special delivery stamp. His sample consisted of the 93 persons from the Fisk University graduating classes of 1924 and 1939 for whom the alumni association had mailing addresses. Through the initial mailing and first follow-up, all persons received the same treatment. The response rate at that point was 56%. The 41 persons who still had not responded were then divided randomly into two groups. Twenty-seven persons were sent a follow-up letter and questionnaire by first class mail; 14 were sent the same items by special delivery mail. Of those persons receiving the first class mailing, 26% responded; of those receiving the special delivery mailing, 64% responded. No results of tests of significance were reported, but the present investigators conducted a chi square test and found the difference of 38% to be significant at the .02 level.

In a mailed questionnaire study of marriage relationships, Longworth (1953) was not interested in different classes of postage, but rather in the effect of varying denominations of stamps on the outgoing envelopes. A series of pretests were conducted to determine the best method of distributing the questionnaires. Six groups of fifty persons each were chosen randomly from the Toledo, Ohio, telephone book to serve as the samples. Each group received a slightly different combination of techniques. Two of the groups were exactly the same, except that on the outgoing envelopes one group received a regular 6¢ stamp while on the other group's outgoing envelope, a 1¢, a 2¢, and a 3¢ stamp were placed. Although no significance tests were performed, a chi square test performed by the present investigators showed the difference in response rates (19% for the first group, 21% for the second group) to be nonsignificant. Thus, on the basis of this study, it seems likely that it is not more effective to use several smaller denomination stamps on the outgoing envelope rather than one larger denomination stamp. This may be interpreted as providing negative evidence for the hypothesis that an appeal to the respondent's perception of his importance will result in a higher response rate. That is, it would be negative evidence if it can be accepted that the respondent is likely to believe he is more important when the investigator takes the time to paste three stamps on the outgoing envelope rather than just one.

Bressler and Kephart (1956) reported an interesting study in which 10 groups (100 persons in each group) of randomly selected Pennsylvania nurses received a questionnaire dealing mainly with attitudes toward various aspects of the nursing profession. Each group received something slightly different from the other groups. The 10 groups were: (a) regular 3¢ stamp on outgoing envelope, (b) airmail stamp on outgoing envelope, (c) special delivery stamp on outgoing envelope, (d) preview letter[8], (e) follow-up letter, (f) preview and follow-up letters, (g) 1¢ cash inducement, (h) 5¢ cash inducement, (i) 10¢ cash inducement, and (j) 25¢ cash inducement. The questionnaire, cover letter, and return envelope were the same for all ten groups. The comparisons of interest in this section are between the three groups having different classes of postage on the outside envelope. The response rate for the group receiving the regular 3¢ stamp was 52%; for the group receiving the airmail stamp it was 60%; and for the group receiving the special delivery stamp it was 66%. The authors state that the difference between 52% and 60% was not statistically significant, but the difference between 52% and 66% was significant. (Although the authors do not give the level of significance, it is reported in a later article, Kephart and Bressler, 1958, as .05.) This result tends to corroborate earlier findings that the use of a special delivery stamp does improve response rates.

Gullahorn and Gullahorn (1959) also wanted to determine the effectiveness of special delivery stamps in eliciting higher response rates. Their sample was composed of former Fulbright and Smith-Mundt grantees in nine midwestern states. After an initial mailing and one follow-up, 79% had responded. The nonrespondents were divided into two groups, one group receiving a second follow-up by regular mail and the other group receiving the follow-up by special delivery. There was a significantly higher response rate ($p < .001$) in a chi square test where Yates' correction had been applied) from those persons who received the second follow-up by special delivery mail.

Cozan (1960) reported the results of a direct mail advertising campaign conducted by the publishers of a professional technical periodical. Although this was not a questionnaire in the strictest sense, it is reasonable to assume that the results could be generalized to other situations where the investigator is trying to get a response from the persons he is contacting. In the Cozan study, a random half (10,000 persons) of the mailing list was sent a promotional letter by first class mail while the other half (10,000 persons) of the sample received the letter by third class mail. The percentages of persons who subsequently subscribed to the periodical were 5.2% and 2.3%, respectively. This difference in percentages was significant at the .001 level in a chi square test performed by Cozan. It could be expected that percentages would be appreciably higher in a typical questionnaire survey where no request was made for the respondent's money, as was the case in this subscription drive. If the ratio shown above were maintained when response rates were higher, it could be of great practical value to the investigator in determining whether or not to send his questionnaires by first class mail.

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[8] A preview letter is one sent to respondents some time (e.g., a week) before the actual receipt of a questionnaire, advising them that they will soon be receiving a questionnaire and usually asking for their cooperation in completing and returning it.

Another study to test the relative effectiveness of first and third class mail was reported by Gullahorn and Gullahorn (1963). They used as subjects 7,340 former Fulbright and Smith-Mundt grantees. In this experiment, a 2 x 2 x 2 factorial design was employed to test the effect of outgoing class of postage, color of the questionnaire, and postage on the return envelope. Subjects were randomly assigned to the eight treatment groups. Fifty-one percent of those persons who received the questionnaire by first class mail responded to the questionnaire while 49% of those who had received third class postage responded. The authors used Reiersl's extension of Neyman's χ^2 test to determine that this difference was significant at the .02 level. This would tend to give added weight to the results found in the Cozan study. It should be realized, however, that the statistically significant finding may have resulted from the large sample, and a two percentage point difference may be of little practical significance.

Champion and Sear (1969), like Longworth (1953), wished to see if the respondent would be more willing to return a completed questionnaire if the investigator took more trouble in getting the questionnaire to him. Their sample consisted of 2,700 persons selected randomly from the city directories of Knoxville, Nashville, and Chattanooga, Tennessee (900 from each directory). Half of the sample received metered postage on both the outgoing and return envelopes, while the other half had outgoing and return envelopes with stamps affixed. Those persons who received stamps rather than metered postage returned the questionnaire significantly more often ($p < .05$), according to results reported by the authors.

Sirken, Pifer, and Brown (1960), in a survey of physicians (872 in one group and 859 in the other group), varied the type of follow-up for each group. They reported that a certified mail follow-up with one group yielded an additional 32% return (above the return from the original mailing), whereas a regular mail follow-up yielded only an additional 21% return. A chi square test computed by the present investigators showed that this difference was significant at the .001 level.

In another study reported in the same article (Sirken, Pifer, & Brown, 1960), one group of 480 persons received a follow-up by regular mail. The response rate to that reminder was 28%. Another group of 473 persons received a follow-up by certified mail. The response rate for that group was 45%. A chi square test computed by the present investigators showed this difference to be significant at the .001 level. One cannot place too much confidence in these results, however, since the authors do not state if the conditions under which the two groups received follow-ups (e.g., time lapse between this follow-up and subsequent follow-ups) were the same for both groups.

The results reported in this section indicate that a more expensive postage rate (e.g., special delivery rather than first class or first class rather than third class) does increase the response rates in mailed questionnaire surveys. This factor was not investigated in the present study, however; all outgoing envelopes had regular 6¢ stamps affixed.

Typed vs. Form Cover Letter

Following the same line of reasoning that was advanced previously, respondents may feel they are more important to the investigator if he takes the time to personalize correspondence to them. Many studies have been undertaken to test the effect of this factor; they are summarized below.

Moore (1941) sent a questionnaire to 494 superintendents of schools in Colorado, Nebraska, Utah, and Wyoming to evaluate courses offered to superintendents by institutions of higher education. Half of the superintendents (from the first half of the districts listed in the state education directories) received a cover letter which had been personally typed; the other half of the superintendents received the same letter in a nonpersonalized duplicated form. After the initial mailing, 62.2% of those persons receiving personally typed letters had returned the questionnaire, while 52.7% of those persons receiving duplicated letters had returned the questionnaire. A chi square test performed by the present authors showed this difference to be significant at the .05 level. After the follow-up (which was in duplicated form to all nonrespondents), the first group had returned 81.9% of their questionnaires while the second group had returned 65.6%. This difference is significant at the .001 level, according to a chi square test performed by the present investigators. Apparently, even if the follow-up is not personalized, the effect of the personally typed cover letter in the initial mailing is salutary. The present study used the same types of letters (typed and form cover letters, form follow-ups), allowing replication if the results are the same as in the Moore study.

As was indicated earlier, four of Clausen and Ford's (1947) groups of nonrespondents received follow-ups by first class mail but had varying degrees of personalization in the salutation and signature. Those groups were (a) impersonal salutation, personal signature; (b) impersonal salutation, facsimile signature; (c) personal salutation, personal signature; and (d) personal salutation, facsimile signature. There were no significant differences among the response rates for any of these four groups.

Weilbacher and Walsh (1952) conducted a mail census of the members of the Columbia University chapter of a professional fraternal organization. The 472 members of the sample were randomly divided into two groups. The cover letter to all respondents was mimeographed, but for one group the last name of the respondent and the sender's signature were written on the letter. At the cut-off date (28 days after mailing), 41% of those persons receiving the more personalized letter had responded, compared with 45% of those who had received the completely mimeographed letter. According to the chi square test computed by the present investigators, this difference is not significant.

Scott (1961) reported that Hoppe (1952) conducted an experiment involving the use of a postscript to the cover letter urging reply.

> ". . . [The] same exhortation to reply was present with both sub-groups [whether the subgroups were randomly chosen or not is unknown], but in only one was it handwritten. The response rates were 32 per cent. and 20 per cent. in favour of the version with the sentence handwritten [Scott, 1961, p. 173]."

In the Longworth (1953) study described earlier, two of the six groups received precisely the same combinations of variables in the survey, except that one group had a mimeographed letter (personally signed and with the date and respondent's name typed in) while the other group had a completely personally typed letter with a handwritten postscript urging return of the questionnaire. The first group had a response rate of 21% and the second group had a response rate of 26%. Significance tests were not performed by Longworth, but the present investigators computed a chi square test on the data and found the difference to be nonsignificant.

Although no details of the study are known, it has been reported by Scott (1961) that Venne (1954) found no difference in response rates among respondents who had been addressed in the cover letter by name, by the term "friend," or by the term "bulletin user." (See Scott, 1961, p. 173.) Without additional information, no interpretation of this finding seems safe. It would be important to know whether the three groups were chosen randomly, whether the letters were identical in content except for the salutation, and whether the letters were identical in form of reproduction. If one could assume that these factors had been controlled, the results would seem to indicate that increased personalization had no effect on response rate.

Mooren and Rothney (1956) reported the results of a study with probably more personalization included in it than in any of the other studies reviewed herein. This study was a follow-up of the 688 students who had participated in the Wisconsin Counseling Study during their years in high school (they had graduated in 1951). Prior to high school graduation, the students had promised to cooperate in the follow-up phases of the study, so a high response rate was to be expected. A random half of the respondents received a mimeographed letter and a standard questionnaire in the initial mailing; three follow-up letters were all mimeographed. The other half of the respondents received a truly personal letter (it noted some of the respondent's high school activities) and a questionnaire geared to the respondent's post-high school activity. The same three mimeographed follow-up letters were sent to nonrespondents in this group, but in all three cases a short handwritten note was included. After the final follow-up, the response rates were 96.8% for the personal group and 93.6% for the general group. A chi square test showed this difference to be nonsignificant. As was pointed out earlier, however, this group of respondents was highly motivated to return completed questionnaires and the very high response rate operated to produce a type of "threshold effect" which may have operated against personalization exhibiting any superiority it might have possessed. Therefore, these results should not be generalized too freely to more typical groups of questionnaire respondents; rather, studies with equally intense personalization should be urged with groups not already predisposed to respond in such a high proportion of the cases.

In a study reported by Frazier and Bird (1958), two counties in Idaho were chosen to test the effectiveness of a handwritten postscript. A random half of respondents in each county received with their questionnaires a mimeographed cover letter with a handwritten signature. The other half of the respondents received the same cover letter, but with a handwritten postscript requesting the respondent's cooperation. A chi square test showed that in the two counties combined, the questionnaires accompanied by letters with the postscript were returned significantly more often ($p < .01$).

Scott (1961) found no significant differences between printed and duplicated initial cover letters, follow-up letters, or questionnaires in a survey of motorcycle owners. The purpose of the study was to collect data on accident rates per mile for different age and experience groups.

In the Linsky (1965) study described earlier, one of the factors manipulated in the cover letter is relevant to this section. A handwritten salutation and signature were included on half of the cover letters. Questionnaires from respondents who had received this more personalized cover letter were returned significantly more often than those who received a mimeographed salutation and signature ($p < .01$, one-tailed test).

In a study conducted by Martin and McConnell (1970), questionnaires were sent to a randomly selected group of 240 persons chosen from the Spokane, Washington, telephone directory. Two of the four factors manipulated in the investigation are relevant to this section. One factor tested the effectiveness of a personally typed cover letter compared with the same letter in mimeographed form. Response rates from the random halves of the respondents receiving the two different letters were not significantly different. The other factor, concerned with the appeal used in the cover letter, will be discussed later in this section.

Kawash and Aleamoni (1971) sent a questionnaire relating to audiovisual instructional materials to faculty members at the University of Illinois. Half of the cover letters accompanying the questionnaires were personally signed by the researcher conducting the study, while the other half of the letters had a facsimile (mimeographed) signature. It is unknown whether these two groups were random halves of the total sample. The salutation ("Dear Faculty Member") was the same on all letters. There were no significant differences in response rates for the two groups (about 28.5% for the personal signature group, about 27% for the facsimile signature group).

Cover Letter Appeal

In the Linsky (1965) study discussed previously, one of the manipulated factors was the content of the cover letter. In one of the cover letters, the importance of the respondent to the conduct of the study was explained. Persons receiving this cover letter rather than one of the other two cover letters used in the study were more likely to return a completed questionnaire ($p < .001$, one-tailed test). The subjects of the other cover letters were (a) social utility of the research and (b) an appeal to help those persons conducting the study. As has been mentioned, it is unclear from the article if a one-tailed test was appropriate, but the obtained z score was sufficiently large to reject the null hypothesis at the same level of significance even if the test had been two-tailed.

Martin and McConnell (1970) included in their cover letter to a random half of their sample of 240 persons an appeal to the respondent's importance to the study. The cover letter to the other half of the sample was more neutral ("Please fill out this questionnaire as soon as possible.") There were no significant differences in the response rates for these two groups.

Summary of Research on Appeals to the Respondent's Perception that He or His Response is Important

The results from studies investigating the effectiveness of certified or special delivery mail in eliciting a higher response rate are quite conclusive, strongly suggesting that respondents do notice "extra efforts" on the part of the investigator. The results from the studies concerned with varying degrees of personalization in the cover letter and the content of the cover letter itself are more ambiguous, however. Therefore, those variables were included in the present study, whereas the first one (varying rates of postage) was not, since extant knowledge relating to this variable seems more interpretable.

Respondent's Willingness to Respond to Request for Help

The only variable included in this section is the appeal employed in the cover letter. As discussed earlier, the cover letter postscript used by Frazier and Bird (1958) in their study helped elicit a significantly higher response rate. The content of that postscript is relevant to this section. The postscript stated "We need your help in this report. Could you please send it in promptly?" It is impossible to know whether the significantly higher response rate ($p < .01$) was caused by the presence of the personalized touch (the handwritten postscript) or by the content of the postscript. The present study should provide relevant evidence, however, since the same "please help us" appeal was made in both the typed and form cover letters.

Sirken, Pifer, and Brown (1960) used two cover letters in one of their surveys. One letter was "firm" (Your health department requests . . .") while the other one was "permissive" (". . . help us in this study . . ."). The initial response rate for the firm letter was 50% and for the permissive letter, 32%. The authors state that this difference is significant at the .01 level, but it is unknown what statistical technique was used in the analysis.

One factor used in the Linsky (1965) study was the cover letter appeal to help those persons conducting the study. The inclusion of this appeal did not result in significantly more responses, however.

Champion and Sear (1969) used two cover letters in their study. One letter employed, in their terminology, an "egoistic" appeal; it urged the respondent to take the opportunity to tell others his opinion on the questionnaire topic. The other letter, also using the authors' term, had an "altruistic" appeal; it pointed out how the respondent could help the research organization by completing and returning the questionnaire. Those persons receiving the egoistic letter returned the questionnaire more often ($p < .05$).

Summary of Research on Appeals to Respondent's Willingness to Respond to Request for Help

Most of the research reported in this section seems to suggest that the "Please help me out" approach is not effective in increasing response rates. However, given the small number of relevant studies and the confounding variables present in some of them, a further test of this motive was made in the cover letter of the present study.

Respondent's Sense of Security in Responding

It might be argued that the more secure a respondent felt in completing and returning a questionnaire (i.e., if the respondent could see no way he could be disadvantaged by doing so) the more likely he would be to cooperate. The most obvious variable included in this section is anonymity, but two studies which compared typed and form cover letters may also be relevant and are described below.

Typed vs. Form Cover Letter

Simon (1967) asked the question of whether personally typed cover letters always bring a higher response rate than do form cover letters. He described three studies designed to answer this question. The first was a study to discover the readership patterns of an internal/external publication produced by an industrial concern. A questionnaire was sent to 500 randomly selected employees and 500 randomly selected subscribers from the general public. A random 50 persons from each group received a personally typed cover letter, while the other persons in the groups received the same letter but in mimeographed form. Among the employee group, 28% of the questionnaires which were accompanied by the personally typed letter were returned while 26% of those accompanied by the form letter were returned. Among the general public group, the percentages were 46 and 38, respectively. Chi square tests computed by the present investigators showed neither of these differences to be significant. The second study was similar in content, but this time the employee and general public groups were divided in half with half receiving a personally typed letter and half receiving a form letter. Also, this time a follow-up letter was sent which maintained the personal/form contrast. Returns from the four groups were:

(a) employee-personal - 52%; (b) employee-form - 59%; (c) general public-personal - 60%; (d) general public-form - 53%. Again, chi square tests computed by the present investigators showed no significant differences between the response rates within each group. The third study involved subscribers to a hospital insurance plan. One hundred of the 974 persons in the sample (unknown how sample was drawn) received personal letters. Fifty-three percent of those questionnaires were returned. Of the 874 persons who received form cover letters, 38% returned a questionnaire. A chi square test computed by the present investigators showed this difference to be significant at the .01 level. In the words of the author,

> "It seems possible that in some cases personally typed cover letters inhibit rather than advance the rate of returns. A reasonable assumption here is that when used in surveys of employees they cause respondents to reflect that anonymity, even though assured, is not really certain because the letters are addressed to them personally. Thus, the nature of the respondent public should be carefully assessed when the decision is being made whether to use a personally typed or a form cover letter [Simon, 1967, p. 30]."

On the basis of the data presented, one might question this assumption since no differences were shown between the general public and employees in their response rates to two different cover letters. That is, in both the general public and employee groups, response rates were not significantly different when personally typed cover letters were sent. A stronger case for the hypothesis could have been made if (a) the response rate for the two cover letters (typed and form) had been significantly different for the general public (with the typed letter eliciting a higher response) and a nonsignificant difference in response rates had been achieved by both cover letters in the employee group, or (b) if the response rates for the two cover letters were the same in the general public group but significantly different in the employee group (with the form letter achieving a higher response rate).

Andreasen (1970) studied the same phenomenon but with a different kind of "respondent public." The members of his sample were winners in the New York state lottery. His hypothesis was that in those cases where anonymity is important, the more impersonal the correspondence accompanying the questionnaire, the greater will be the return. Andreasen's belief was that lottery winners are particularly mindful of the anonymity promise made in many questionnaire surveys because, after announcement of their winnings is made, they are subject to numerous high pressure selling tactics. A secondary belief was that some lottery winners might associate the source of the questionnaire with the state government -- and thus perhaps with income tax -- another reason the winners might want their anonymity maintained. Three cover letters were developed to test Andreasen's hypothesis; all three were identical in content, mimeographed, and with a handwritten signature. The first letter was the least personal; it had a mimeographed "Dear Lottery Winner" salutation. The second letter had a typed salutation to the individual respondent. The third letter had the personal salutation of the second letter and a handwritten postscript urging the respondent to cooperate. There were two follow-up letters developed which were identical in content and which were sent to random halves of the nonrespondent group. One was completely mimeographed (including the signature) and the other was completely handwritten. A second follow-up letter was mimeographed and sent to all nonrespondents. In all cases, the assignment of correspondence forms to members of the sample was random. There were no significant differences in response rates for the three groups after the initial mailing. After the follow-ups, there was modest support for the hypothesis, but no statistical tests were performed. It would seem to be a weakness of the study that the different levels of personalization were randomly assigned each time, however, because the possibility exists that the effect of the most personal cover letter would be negated by receiving the completely mimeographed follow-up, and vice versa. The present study did not maintain the personalized/form cover letter dichotomy after the initial mailing, thus alleviating some of the problems of the cancelling effects possible in the Andreasen study.

Anonymity

Before describing the studies related to this variable, one of the warnings issued at the beginning of this chapter should be reiterated. That warning was concerned with the fact that some of the studies reported in this chapter dealt with the questionnaire but not the mailed questionnaire and, as a result, research results should not be generalized automatically to the mailed questionnaire. It seems that most of those studies fall under the variable of anonymity.

The studies are included in this section because of the belief held by the present investigators that the results of these studies may be generalizable to mailed questionnaire surveys. The generalizability of the results rests on a major assumption. That assumption is that the anxiety caused by filling out a questionnaire when the respondent's name is identified with the answers is just as great regardless of whether the respondent is in a group completing the questionnaire or in his home alone completing the questionnaire. The same anxiety that might cause respondents in a group situation to answer questions more positively than they might if they were sure their responses were anonymous might also account for respondents failing to return a mailed questionnaire when they are unsure of their anonymity. Results of some of the studies reported in this section are concerned directly with this aspect of anxiety, and it is for that reason they are included in this review.

Gerberich and Mason (1948) reported the results of a study in which 1460 students in 10 sections of an introductory biology course responded to a questionnaire concerning certain aspects of the course and signed their names, while 1416 students in 10 other sections responded to the same instrument anonymously. The authors stated that "No criteria [were] used to determine signed or unsigned sections [Gerberich & Mason, 1948, p. 123]," so the results are of questionable validity because of the lack of knowledge about the randomness of the sample. Five of the 44 items in the questionnaire showed significant differences, but not in the pattern one would have guessed (i.e., to three of the five items, the anonymous respondents gave a more positive answer than did the identified respondents, while it would have been expected that the identified respondents would give more positive answers and do some "apple polishing"). The investigators concluded that for the particular questionnaire used, identification of respondents does not significantly alter their responses.

Scott (1961) indicated that

> "Hoppe (1952) reports an experiment on the effect of respondent anonymity on the response rate. Postcard questionnaires were sent to motorists who had passed an observation point, asking age and sex of driver, number of passengers, and number of miles driven. It was stated that replies would be confidential. Serial numbers were used for identification, but in half the cases the numbers were written in invisible ink. There was no appreciable difference in response rate where invisible ink was used [Scott, 1961, p. 176]."

This would appear to be a sound test of the effects of anonymity, assuming the halves of the sample were randomly drawn and Scott's interpretation of Hoppe is correct.

Rosen (1960) reported a study which was the forerunner of a larger investigation concerning the effectiveness of a developmental reading program at Purdue University. It was necessary to determine if a lack of anonymity would adversely affect the attitude measurements gathered in such an investigation. Subjects in this study were 678 first semester college freshmen in a developmental reading course. Each student completed two questionnaires of 10 items each; one questionnaire was designed to measure the student's attitudes toward reading and the other was designed to measure attitudes toward the particular reading course in which he was enrolled. About half of the students were asked to sign their name to the questionnaires; the other half were not. The division was made so that the two groups were comparable in terms of instructors, academic ability (measured by the Purdue Placement Tests), and school of enrollment. In the attitude-toward-reading questionnaire, there were no significant differences between the groups. On the attitude-toward-the-course questionnaire, the anonymous group had a significantly higher mean ($p < .05$), but in Rosen's view, "For practical purposes this [less than 2 point difference in means on a 40 point scale] is not worth very much concern [Rosen, 1960, p. 678]."

Mason, Dressel, and Bain (1961) reported the results of a pretest used to determine the effect on response rate of two aspects of procedures -- questionnaire length and form of address. On the questionnaires sent to a random half of the sample (total N was 741), the respondent's name, address, and a code number were included; on the other half of the questionnaires, only a code number was included. There was no significant difference in the number of returns from the two groups.

Summary of Research on Appeals to Respondent's Sense of Security in Responding

Although most of the studies reported in this section show no real differences between anonymous and nonanonymous responses, only two studies (those by Hoppe and Mason, Dressel, & Bain) directly tested the effect of anonymity on response rate. Therefore, that factor was included in the present study. The possibility that response rate could be affected by the personalization in the cover letter (as Simon and Andreasen hypothesized) was also investigated, since it was possible to test the cover letter by anonymity interaction in this experimental design.

Respondent's Financial Motives

The variables included in this section are stamp on return envelope, monetary incentives, and other financial incentives.

Stamp on Return Envelope

To say that putting a stamp on a return envelope appeals to the respondent's financial motives (i.e., saving the respondent from paying the postage for returning the questionnaire) may be straining the definition of this motive a bit. Nevertheless, this variable is included in this section because of the belief that the investigator who does include a stamped return envelope, in most cases, actually is trying to make the respondent believe his response will cost him (the respondent) nothing.

Some of the articles described below deal with comparisons of response rates from stamped return envelopes and franked return envelopes. These studies seem relevant to the earlier motive "Respondent's Perception that He or His Response is Important," since the respondent might think the investigator cared more about his response when he took the time to paste a stamp on the envelope instead of using a franked envelope. The articles are included here, however, because the present investigators believe that many persons recognize the fact that the franked envelope does not cost the investigator money unless it is returned. Thus, the respondent probably does not feel that he is "throwing money away" when he fails to return a franked envelope, as he might feel if he failed to return a stamped envelope.

Price (1950) sent letters to members of the Southern Sociological Society requesting that they join the American Sociological Society. A return envelope was enclosed in which those persons interested in joining could send the membership fee. Seventy-six persons (randomly chosen) received a stamped return envelope; 26.3% of them became members. Eighty-one persons received an unstamped return envelope; 17.3% of those persons joined the Society. The difference in these percentages is significant at the .001 level. As was stated when discussing the Cozan study earlier, this is an important finding but it should be tested again when no request for money is made of the respondent -- i.e., when simply a written response is required. Such a test was made in the present study and is reported later in this report in Chapter 4.

Robinson and Agisim (1951) reported that they sent a stamped return envelope to 1500 respondents while 1500 other respondents were mailed questionnaires with business reply envelopes enclosed. Returns from the stamp group were 73.8%, and from the business reply group, 66.3%. Details of the study (e.g., randomness of the sample) are not provided, so one cannot be completely confident in the results. However, a chi square test computed by the present investigators showed the difference in response rates to be significant at the .001 level.

Ferriss (1951) sent a questionnaire to all professors of introductory sociology courses in the 241 four year colleges and universities in the 11 southeastern states. Eighty-nine professors received a questionnaire but no return envelope, while 141 professors received the questionnaire and a stamped return envelope. It is not known if the respondents were randomly assigned to these two groups. The nonrespondents in the group of 141 received two follow-ups (with stamped return envelopes), while the nonrespondents in the group of 89 apparently received no follow-up. About 90% of the 141 persons responded, while only about 26% of the 89 responded. Although this difference is highly significant ($p < .001$) and is quoted frequently as evidence of the effectiveness of stamped return envelopes, the results do not warrant such acceptance, for at least three reasons: (a) no information is provided about the selection of the two groups, (b) the effect of the stamp is confounded by differential follow-up procedures, and (c) the lack of an envelope (and not just the lack of a stamp) is a confounding element in one of the groups.

In one of the tests described by Hammond (1959), two of the groups (N greater than 1000 in each group) received the same questionnaire and cover letter. One of the groups received a business reply envelope; the response rate from that group was 33.3%. The other group received a stamped return envelope; that group's response rate was 42.6%. The difference in this response rate was reported by Hammond as significant at the .001 level, but no mention was made in the article of the statistical technique used in the analysis.

In the second of the Gullahorn and Gullahorn (1963) studies described earlier, half of the former Fulbright and Smith-Mundt grantees received a business reply return envelope and the other half of the grantees received a stamped return envelope. Even though the response rates differed by only four percentage points, the difference was significant ($p < .01$) in favor of a stamped return envelope. It should be remembered that the sample in this study was quite large.

In the radio and television survey described by Scott (1961) and discussed earlier in this chapter, half of the sample received an unaddressed return envelope with a stamp attached while the other half received an envelope with an addressed, franked label attached to the flap. The same treatment was repeated in a follow-up. Final return rates were 93.3% for the stamp and 89.2% for the franked label. Scott concluded that this was a ". . . significant, though small, advantage . . ." for the stamp over the frank [Scott, 1961, p. 170]. There seems to be some confounding with the variable of whether or not a return address was supplied on the envelope, however. Scott noted that in another survey described in the same article, this variable was studied specifically and no significant differences were found between an addressed label attached to the flap and one enclosed loose in the outgoing envelope. Scott used this result to suggest that no confounding should have influenced the results reported above. The variables were not the same in the two situations, however, nor was the variable in the second survey studied in interaction with stamp vs. frank. Thus, there is really no unequivocal way to assess directly the simple difference between stamp and frank in Scott's radio and television survey.

Martin and McConnell (1970) furthered research in this area by sending two questionnaires (in the same envelope) to a randomly selected group of 240 persons from the Spokane, Washington, telephone directory. Half of the sample received the questionnaires with a return envelope with franking, while the other half of the sample received return envelopes with a commemorative stamp affixed. Using a one-tailed test, the authors report a significant difference ($p < .05$) in response rates in favor of the group receiving the commemorative stamp.

Monetary Incentives

In an early study, Shuttleworth (1931) reported the results of a study in which a random sample of 617 persons in two western New York counties received a questionnaire with 25¢ enclosed, while 380 randomly selected persons from six counties adjacent to the two counties above received the same questionnaire with no coin. No tests were performed to determine the comparability of the two different areas, but the authors argued that they were not greatly dissimilar. The response rate from the persons receiving the coin was 51.5%; from the noncoin area it was 19.1%. This difference of 32.4% is 16 times as great as its probable error, thus pointing up the statistical significance of the finding. Of course, if the two areas were significantly different on variables such as socio-economic level, there could be other plausible explanations for this finding.

Hancock (1940) tested four methods of collecting data about attitudes toward retail stores. In three of the methods, a mailed questionnaire was employed; a personal interview was used in the fourth. The three mailed questionnaire methods differed in the following ways: (a) the first cover letter simply explained the purpose of the study and gave directions for completing the questionnaire; (b) the second cover letter paralleled the first but also included 25¢ and gave an explanation of why it was enclosed; (c) the third cover letter was the same as the first except that it included a statement that upon receipt of a completed questionnaire, the respondent would be sent 25¢. The returns from the three groups were 9.6%, 47.2%, and 17.6% respectively. No tests were performed by Hancock to see if these differences were significant, but the present investigators computed a chi square and found the differences to be highly significant ($p < .001$).

Maloney (1954) reported that as part of a larger study, 148 persons received a mailed questionnaire. One group of 74 persons received 25¢ in the initial mailing; nonrespondents in this group received one follow-up. The other 74 persons received no money; nonrespondents received two follow-ups. Randomness of the sample and the two groups is unknown. The response rate from the first group was 86% and from the second group, 58%. Although there is confounding by differential follow-up procedures (two follow-ups to the second group), this should have worked in favor of the "no money" group. Therefore, the large difference in response rates can be attributed to the monetary variable. A chi square test performed by the present investigators showed the difference between the groups to be significant at the .001 level.

Four of the factors included in the Bressler and Kephart (1956) study described earlier were a penny, nickel, dime, and quarter included in the initial mailing. It will be remembered that the basic response rate (regular 3¢ stamp on outgoing envelope, no preview or follow-up letter) was 52%. With 1¢ enclosed, the response rate was 55%; with 5¢, it was 54%; with 10¢, it was 57%; and with 25¢, it was 70%. Although no tests of significance were performed on these five response rates, it was noted that the 70% response was not statistically different from the 68% response achieved with the addition of a follow-up letter to the basic initial mailing. Thus, the authors seem more interested in noting that nearly the same response rate can be achieved by the much cheaper method of sending a follow-up letter.

Newman (1962) does not report many details of his study, but in a pretest to determine the effect of inclusion of a premium (among other things) on response rate with Esquire subscribers as respondents, he noted that a $1.00 premium produced significantly more responses than a 25¢ premium. There is no mention of whether the groups were selected randomly, nor is there mention of the significance level of the difference.

Other Financial Incentives

Not all of the incentives offered to get respondents to return questionnaires are coins. Bevis (1948), for example, used war savings stamps as incentives in a survey conducted during the last months of World War II. Three comparable samples were chosen from among the persons who had responded to advertisements in a national magazine. One of the groups received a 10¢ war stamp with their questionnaires, another group received a 25¢ war stamp, and the third group received a 50¢ war stamp. It was reported that the groups receiving the 25¢ and 50¢ war stamps had approximately equal response rates, but the 10¢ stamp group had a definitely lower response rate. No detailed figures or significance test results were given.

Brennan (1958) also used stamps in his study, but in this case they were trading stamps. From a census tract with characteristics approximating the "average" household in a particular market area, 456 households were randomly selected. A two page questionnaire and 50 trading stamps were mailed to 235 of the households. The same questionnaire without the trading stamps was mailed to the remaining 221 households. Response rates for the two groups were 29% and 22%, respectively. A chi square computed by the present investigators showed this difference to be nonsignificant.

Summary of Research on Appeals to Respondent's Financial Motives

It would appear that the use of stamped return envelopes and financial incentives do improve response rates. Financial restraints prevented the inclusion of monetary or other incentives as a factor in the present study. The stamp variable was included, but it was manipulated as stamp against no stamp on the return envelope rather than stamp against frank. Thus, it was possible to test the effect of the stamp alone, not varying formats of the stamp.

Respondent's Guilt Feelings

The variable which appeals most to this motive is follow-up of nonrespondents. Other variables which may be relevant are stamp on return envelope and stamp on outgoing envelope.

Stamp on Return Envelope

Because the respondent may feel he is "throwing the researcher's money away" by not making use of a stamped return envelope, he may feel guilty about failing to complete and return a questionnaire when such an envelope is provided. The studies just described under the preceding motive, "Respondent's Financial Motives," are relevant to this section as well; they will only be noted in this section: Price (1950), Robinson and Agisim (1951), Ferriss (1951), Hammond (1959), Gullahorn and Gullahorn (1963), Scott (1961), and Martin and McConnell (1970). Viewed collectively, they suggest strongly that the stamped envelope is an effective technique, whether it is an appeal to financial motives or guilt feelings.

Stamp on Outgoing Envelope

The studies included in this section are some of the same ones as were described in this variable under the "Respondent's Perception that He or His Response is Important" motive: Clausen and Ford (1947), Phillips (1951), Bressler and Kephart (1956), Gullahorn and Gullahorn (1959), Cozan (1960), and Gullahorn and Gullahorn (1963). They will not be described further at this time. The reason they are included in this section is that it may be that respondents feel more guilty -- and hence more likely to comply with a request to complete a questionnaire -- when the investigator has used an expensive (i.e., first class or special delivery) postage rate in getting the questionnaire to him. Guilt as well as feelings of importance may be a causal factor in the increased response rates generally associated with more expensive postage rates.

Follow-up

"The use of follow-ups, or reminders, is certainly the most potent technique yet discovered for increasing the response rate. . . . [It] is the only technique which has been consistently found to raise response by a substantial amount -- say over 20 per cent [Scott, 1961, pp. 164,178]." Research has been done not only to test the effectiveness of a follow-up, but also to test the varying degrees of effectiveness of different forms of follow-up. Many studies have combined the use of the mailed questionnaire in the initial mailing with a telephone follow-up. Those studies are not presented in this section, however, since it was decided that if those were included, other studies employing the personal interview in a follow-up would also have to be included, and in time the main focus of this chapter -- the mailed questionnaire -- would be lost. Therefore, the studies presented in this section deal with mailed follow-up correspondence only.

One of the earliest studies on the mailed questionnaire technique was conducted by Sletto (1940). He conducted a pretest with three hundred persons (members of a university alumni association) to test the response rates for three questionnaires of different lengths. He divided the pretest nonrespondents into two groups; one group received a follow-up postcard and the other group received a follow-up letter. The same mimeograph stencil was used for the postcard and the letter, the same handwritten signature appeared on both, and they were mailed on the same day. Three weeks later (the apparent cut-off date), exactly the same number of persons had responded to postcard as to letter. If this finding could be replicated several times, and found to be generalizable, it could lead to a great savings of postage for the investigator. This is one of the variables included in the present study.

In a large, continuing study of the monthly retail sales of 19,000 business firms, Miller and Engquist (1942) reported that 26% of the firms receiving a follow-up responded while only 21% of the firms who did not receive a follow-up responded. Although the authors say this difference is statistically significant (statistical technique and level of significance not indicated), it represents the smallest increase resulting from the follow-up in any study reviewed herein.

Some of the most convincing research on the effectiveness of the follow-up was conducted by Bressler and Kephart (1956). Three of their ten groups, it will be remembered, were preview letter, follow-up letter, and both the preview and follow-up letters. The preview was a letter sent one week before the questionnaire was mailed, asking for the respondent's cooperation in the questionnaire survey. The follow-up was a letter, another copy of the questionnaire, and another stamped return envelope sent four weeks after the initial mailing. The basic response rate was 52%. With a preview letter, the response was 53%; with a follow-up, it was 68%; and with both a preview and a follow-up, it was 67%. The only group included in the Bressler and Kephart study which produced a higher response rate than the follow-up was the inclusion of 25¢ in the initial mailing. The response rate from that incentive was not significantly different from the response rate elicited by the follow-up. Thus, the authors concluded that the follow-up was the most economical, most effective way to increase response rates in mailed questionnaire surveys.

Scott (1961) reported two surveys in which the effectiveness of the follow-up was tested. In a survey of the British general adult population, two parallel subsamples were used to estimate the number of fowls and pigs kept on nonfarm holdings. One subsample received a follow-up soon after the questionnaire was mailed and another reminder after two weeks; the response rate for that group was 93.2%. The other group received only the final reminder two weeks after the initial mailing; response rate for that group was 85.9%. Scott concluded (with Ns of 771 and 785 for the 2 groups, respectively) that "The difference of 7.3 per cent. in response is unquestionably significant [Scott, 1961, p. 165]." A chi square test performed by the present investigators confirmed this ($p < .001$).

In Scott's (1961) pilot survey of 278 telephone subscribers to determine their satisfaction with telephone service, no follow-up was used. The response rate was 74.8%. Two follow-ups were used with the larger (N = 1,050), but directly comparable, sample in the main survey; a 95.6% response rate was achieved. This difference is significant at the .001 level, according to a chi square computed by the present investigators.

Summary of Research on Appeals to Respondent's Guilt Feelings

It is quite clear that the follow-up is an effective technique in increasing response rates. If that were all the knowledge required, inclusion of that factor in the present study would have been unnecessary. Other knowledge, however, would be most useful to the investigator using the mailed questionnaire. For example, is the much less expensive postcard follow-up as effective as the follow-up letter with another questionnaire enclosed? To gather data on this topic, follow-up was included in the present study.

Respondent's Ease in Responding

It is commonly believed by most persons preparing a mailed questionnaire survey that the easier the respondent's task is, the more likely he is to complete and return the questionnaire. Research has been done to see if this belief is supported by data. Studies about questionnaire length, questionnaire format, and the complexity of the respondent's task are included in this section.

Questionnaire Length

In the survey of questionnaires conducted by the National Education Association (1930), the average response rates could be determined for questionnaires of varying lengths. It should be remembered, however, that only about half of the investigators contacted complied with the NEA's request for response rate figures; and that it is likely that it was those persons whose surveys had achieved poorer responses who failed to provide the information. The figures presented here, therefore, may be inflated to an unknown degree. The NEA defined questionnaire length as the number of items included in the questionnaire. [The present investigators refer to this as "actual length;" "apparent length," on the other hand, refers to the number of pages in the questionnaire. This distinction becomes important as more studies are discussed.] The highest response rate (78.5%) in the NEA study, as might be expected, was attained with those questionnaires having five or fewer items. Response rates descended as the number of items increased, but that progression held only until the questionnaire reached 40 items in length. For some unknown reason, questionnaires with between 41 and 75 items increased in response rates. With more than 75 items, the response rates (predictably) decreased.

A study concerned more with apparent length than actual length, as defined above, was reported by Sletto (1940). He conducted an extensive pretesting procedure in which length of the questionnaire was one variable of interest. In the pretest sample of 300 persons, 100 respondents were sent a 10 page questionnaire with items concerning the individual's vocational activities, interests, and needs. A second group of 100 was sent a 25 page questionnaire with items concerning the individual's socio-civic activities, interests, and attitudes. The third group of 100 was sent the above two questionnaires combined into one 35 page instrument. Response rates ranged from 60% (25 pages) to 68% (10 pages). ". . . [It] was concluded that the factor of length, between the limits of 10 and 35 pages, was not likely to affect returns . . . by more than 5-10% [Sletto, 1940, p. 195]." Although in the view of the present investigators an increase of 5-10% is not trivial, it should be noted that one limitation of this study is that the questionnaires were on different topics, so the researcher cannot really say anything about the effect of instrument length without also mentioning the confounding effect of instrument content. The present study controlled for this by sending the same questionnaires in two different lengths to random subgroups of the sample.

Shannon (1948) searched three sources to discover the extent of usage of the mailed questionnaire. Those sources were all master's theses through 1946 at Indiana State Teachers College, all doctoral dissertations through 1945 at Columbia University Teachers College, and the first 39 volumes (through June, 1946) of the Journal of Educational Research. A total of 532 studies were identified in which at least one questionnaire was administered. Some of the 532 studies used more than one questionnaire, resulting in a total of 639 questionnaires. Essential information was not presented for all 639 instruments, however. The author did not note the kind of information sought in the questionnaires, and in the absence of such data it cannot be assumed that they were all comparable. Keeping this in mind, data concerning questionnaire length and response rates were presented. The average response rate for the 163 questionnaires which were one or two pages in length was 75.7%; the average response rate for the 73 three to five page questionnaires was 70%; and the average response rate for the 41 questionnaires over five pages in length was 67%. Although the differences were significant between the first and second groups ($p < .05$) and the first and third groups ($p < .03$), care should be taken not to overgeneralize these results. Data were reported for only 277 of the 639 questionnaires; as in the NEA (1930) study, it is likely that the response rates were lower for those surveys which did not provide the relevant data. Thus, Shannon's report must be interpreted cautiously.

Scott (1961) reported that "Maas (Durant and Maas, 1956) reports a 77 per cent. response from a sample of former students replying to a 53-item questionnaire, compared with 65 per cent. from an apparently similar sample sent a two-item postcard questionnaire [Scott, 1961, p. 168]." No significance tests were reported.

Sirken, Pifer, and Brown (1960), according to Scott (1961),

> "sent two short questionnaires (how short is not stated) and one long questionnaire consisting of rather more than the sum of the short ones. Response rates were within 3 per cent. of one another and did not differ significantly. . . . however, the first-wave response was significantly higher the shorter the questionnaire [Scott, 1961, p. 167]."

Mason, Dressel, and Bain (1961) sent a 6 page 62 item questionnaire to half of their sample and an 8 page 92 item questionnaire to the other half of their sample. It is unknown if the 92 item questionnaire contained the 62 items of the 6 page questionnaire. No significant differences were found between response rates to the two questionnaires. This study suffers from a lack of knowledge about the comparability of the two questionnaires; without such knowledge, it is impossible to reach a valid conclusion about the effect of questionnaire length.

Newman (1962), in his pretest described earlier, sent half of the respondents a two-page questionnaire and the other half a four-page questionnaire. Again, no mention is made of how these questionnaires differed -- if they did at all -- in content. Therefore, the conclusion reached by the author of no significant difference between the response rates to the two-page and four-page questionnaires cannot be accepted without question.

Scott (1961), in the radio and television survey, sent three questionnaires: two short questionnaires with different questions and one long one consisting of the two shorter instruments combined. Each of the three questionnaires was sent to a third of the sample of 4,536 persons. (Earlier in his article, Scott said all comparisons were made with "properly balanced samples," but it is unknown if this meant that they were random subsamples.) There were no significant differences in response rate.

Champion and Sear (1969) conducted a study in which a questionnaire with a fixed number of items was designed so that three forms of the instrument were made: three, six, and nine pages in length. In both the initial mailing and the follow-up, the six- and nine-page questionnaires were returned most frequently. The difference in response rates between these longer questionnaires and the three-page questionnaire was significant ($p < .05$) in the initial mailing, but not in the follow-up. Each questionnaire was received by 900 persons. The response rates were not significantly different between the six- and nine-page questionnaires.

Questionnaire Format

The NEA (1930) reported that

> "The reply received is . . . affected slightly by the character of information requested. The 71 questionnaires asking for objective data only, received a median reply of 74 percent, the 51 asking for both objective and subjective data received a 65 percent reply, and the 14 asking wholly for subjective material received a 61 percent reply [National Education Association, 1930, p. 36]."

Another of the cautions repeatedly given about these results is warranted: response rates were available for only half of the questionnaires identified. How the results would have been affected had all the data been received is an unanswerable question.

Scott (1961), in his survey of motorcycle owners, found significant differences in response rates when three alternative formats were used. The three lay-outs were: (a) questionnaire on one side of a single page and cover letter on the other side, (b) questionnaire on one page and cover letter on another single page, and (c) the same questions spread out on a two-page questionnaire and cover letter on a third page. The response rates for the three lay-outs were 95.8%, 93.6%, and 94.8%, respectively. The differences between 95.8% - 93.6% and 93.6% - 94.8% were significant, but no mention is made of whether the difference between 95.8% and 94.8% was significant. Here, though, as with the results of several of Scott's surveys, one must be wary of statistically significant differences associated with very large Ns. One must question the practical significance of several of Scott's findings which differ in only a percentage point or two.

Simplicity of the Respondent's Task

Brown (1965) reported the results of a study designed to test two alternative mail survey procedures for collecting cystic fibrosis data from physicians. Brown reasoned that it was unlikely that many physicians other than pediatricians would have treated cystic fibrosis, so he wanted to develop a form which would appear simple and which minimized the work required for those doctors who had not treated cases of cystic fibrosis. Therefore, a sample of 523 nonpediatricians was randomly divided into two groups. A two-page questionnaire was sent to one subsample; the first page had a cover letter and two screening questions to ascertain if the doctor had treated cystic fibrosis, and the second page provided space for reporting names, demographic data, and diagnoses of patients who had cystic fibrosis. The response rate to this questionnaire after the initial mailing was 53%. The other subsample received a single page cover letter and a reply postcard with the two screening questions on it. The response rate from this group after the initial mailing was 68%. The difference in these two response rates is significant at the .05 level (no indication of what statistical technique was used). Thus, it would appear that the task which appeared to be more simple achieved a higher response rate, even though the amount of actual work for the doctor who had not treated a patient with cystic fibrosis was the same in both cases. It should be noted, however, that after the follow-up mailing, there were no significant differences in response rate for the two groups.

In the Martin and McConnell (1970) study, two questionnaires were sent in the same envelope to respondents. The two questionnaires differed in difficulty: one was a 26 item Likert-type instrument while the other required the respondent to rank a set of 35 "misbehaviors" in some specified order. It was assumed by the investigators that the first questionnaire would be the easier of the two. When the easy questionnaire appeared first, the two questionnaires were returned more often ($p < .05$ in a one-tailed test; a directional hypothesis had been made by the investigators) than when the difficult questionnaire appeared first. This would corroborate the hypothesis that if a respondent perceived his task to be an easy one from the beginning, he will more likely carry out that task to completion.

Summary of Research on Appeals to Respondent's Ease in Responding

It does appear, from most of the results reported above, that the easier the respondent's task, the higher the response rate will be. Apparent and actual length were investigated in the present study, but no empirical tests of the type of questions asked (objective or subjective) or the degree of difficulty of the task were conducted.

A Summary Deferred

A summary of the research reviewed above is deferred to Chapter 5 to allow the results of previous research to be synthesized with the results of the present study.

CHAPTER 3

METHODS AND PROCEDURES

In the two preceding chapters, the problem being investigated has been defined and a body of literature pertinent to the problem has been reviewed. This chapter contains a description of the specific methods and procedures used to collect and analyze the data necessary to answer the questions posed in this study.

Design of the Study

As was stated in Chapter 1, six variables were studied in this investigation: perceived threat of questionnaire content, length and format of questionnaire, content and personalization of cover letter, return postage paid or not, follow-up correspondence, and anonymity. (See the section on "Perspective of this Study" in Chapter 1 for a more detailed discussion of variables and levels of variables used in this study.)

In order to answer the questions posed in Chapter 1, it was necessary to be able to investigate the effects of these six variables, singly and in combination. A research design was necessary which would allow the testing of main effects and interactions. Whereas in some studies interactions (especially the higher order interactions) are not particularly meaningful, the interactions in this study allowed the researchers to investigate the effects of various combinations of techniques. Therefore, the design adopted for this study employed all combinations of all six variables; it was a completely crossed design (see Figure 1). Thus, it was possible to analyze the individual effects of the six variables on response rates as well as to analyze the effects of all possible combinations of the six variables.

Conduct of the Study

The general sequence of activities for the study was the following: (a) an initial mailing of cover letter, questionnaire, and return envelope was made on April 4, 1972; (b) the first follow-up correspondence to those persons who had not responded was mailed approximately five weeks later; (c) a second follow-up contact to the remaining nonrespondents was made approximately five weeks after the first follow-up. Not all of the six variables were manipulated in all of the mailings. For example, the

QUESTIONNAIRE 1

		return envelope stamped								return envelope not stamped							
		length a_1		length a_2		length b_1		length b_2		length a_1		length a_2		length b_1		length b_2	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
no follow-up	C.L. a_1																
	C.L. a_2																
	C.L. b_1																
	C.L. b_2																
follow-up postcard	C.L. a_1																
	C.L. a_2																
	C.L. b_1																
	C.L. b_2																
follow-up letter (questionnaire enclosed)	C.L. a_1																
	C.L. a_2																
	C.L. b_1																
	C.L. b_2																

FIGURE 1

Design of the Study*

Key:

length a_1=one page printed on both sides, 20 items
length a_2=one page printed on both sides, 40 items

length b_1=three pages, 20 item
length b_2=three pages, 40 item

C.L.a_1=typed cover letter, professional appeal
C.L.a_2=typed cover letter, personal appeal

C.L.b_1=form cover letter, professional appeal
C.L.b_2=form cover letter personal appeal

A = anonymity assured
NA = anonymity not assured

* 576 cells (192 x 3 questionnaires) with 8/cell -- total N = 4608

typed-form letter dichotomy was utilized only with the cover letters in the initial mailing; none of the follow-up correspondence was personally typed. The stamp-no stamp on return envelopes variable was abandoned after the initial mailing; none of the return envelopes used in the follow-up correspondence had a stamp affixed. This was done for several reasons: (a) if these variables had been employed throughout the design, there would have been a need for more respondents (to keep cell size constant), thus increasing the cost of the project; (b) if these variables had been included throughout the design, the number of levels of variables would have exceeded the capability of the computer program used to analyze the data; and (c) it was expected that it would be reasonable to generalize the results from the first incidence of the variables to later occasions where those variables might have been included.

The Population and Sample

To answer the questions posed in Chapter 1, it was necessary to define a population of persons to whom questionnaires were likely to be sent in the course of educational research. From that population, it was necessary to select a sample to whom the questionnaires in this study would be sent. Selection of both groups is described in this section.

There were several populations which could have been chosen to test the effectiveness of various techniques for increasing the return rates of mailed questionnaires. It was necessary to choose a typical population of research subjects -- a population about which information is frequently sought by use of mailed questionnaires. It was necessary to choose a population for whom meaningful questionnaires could be developed. It was necessary to choose a population which was experimentally accessible. For all of these reasons, it was decided to choose as the population of interest all faculty members in four-year colleges and universities in the United States. Faculty at junior and community colleges were not included in the population because it was believed that more specific -- and therefore better -- questionnaires could be developed if the level of employing institutions of the faculty was as homogeneous as possible.

One of the criteria for selection of a theoretical population for investigation was that its members be experimentally accessible. The population of college and university teachers was, to a great extent, available through a publication called the National Faculty Directory. The 1970 issue of this directory, to which the investigators had access, included 320,000 names of faculty members at American two- and four-year institutions of higher education. The publishers of the directory state their belief that the names listed in the directory represent over 95% of all such faculty members.

There were problems, however, with the use of this directory. The age of the directory meant some addresses might be out of date by up to three years. Although "Please Forward" was posted on each outgoing envelope, it is reasonable to assume that some were not forwarded and, hence, the more mobile members of the population of faculty might be less likely to receive (and hence return) a questionnaire sent to them. Also, new members of the college and university faculty were not represented in the population, since they could not have been included in the directory. Even with these limitations, however, it was decided that the names included in the National Faculty Directory were sufficiently representative of the theoretical population of American college and university faculty members to warrant being considered the experimentally accessible population.

The research design called for a total of 4,608 persons to receive questionnaires. Three names were chosen from every page (the last name in the first, third, and fifth columns of each page) of the National Faculty Directory. This resulted in 5,067 names being drawn. From the 5,067, names were drawn randomly eight at a time to fill the 576 cells in the experimental design.

The 459 names remaining after this procedure were reserved for use as replacements for any persons in the original sample who could not be reached by mail. For the purpose of this study, it was deemed necessary that 4,608 persons receive a questionnaire, not just that 4,608 questionnaires be mailed. Therefore, any questionnaires which were returned as undeliverable were sent to new persons, chosen randomly from the 459 extra names.

The Questionnaires and Cover Letters

Since the problem under study in this investigation was response rates to mailed questionnaires with differing degrees of perceived threat, it was necessary to construct questionnaires to be sent to the members of the sample. Detailed descriptions of the instruments used, their construction, the cover letters accompanying them, and the procedures whereby they were administered are included in this section.

Development of the Questionnaires

When the present study was initially designed, the investigators did not intend to gather data for the purpose of conducting actual research on the topics of the questionnaires. That is, the only interest at first was whether a questionnaire was returned or not. It became clear, however, that a wealth of useful data could be gathered as a byproduct of the main study. Therefore, since the population was to comprise university and college professors, it seemed prudent to choose topics in higher education which were not only interesting and timely but also where professors' opinions relating to the topics would be of significance.

The first step toward choosing such topics was to consult with persons knowledgeable in the field of higher education. Indeed, one of the cardinal principles of questionnaire development is that the investigator should have a good background in his topic of study, either through experience or through review of existing literature, and preferably by both. Neither of the investigators in the present study had particular expertise in the field of higher education as a topic of study; therefore it was necessary to consult with persons with special expertise in that field.[1] Through these discussions and review of pertinent literature, adequate backgrounding was achieved.

The three consultants suggested several topics of current interest in the field of higher education, and offered leads as to where more information about those topics could be found. After considerable reading, particularly in the Journal of Higher Education (1971) and Theory into Practice (1970), the investigators decided on three topics which, on logical grounds, appeared to differ in the level of perceived threat, as was called for in the research design. These topics were the role of higher education, governance of higher education, and control of higher education. Numerous questionnaires were gathered[2] and searched for useful items. Although none of the items were used directly, the existing instruments did offer many ideas for items which could be incorporated into the developing instruments.

The research design required a maximum of forty items for each topic. However, it was necessary to develop a pool of items for each of the topics and submit these items to a pilot test to determine which should be selected to make the best instruments possible. Consequently, many items were written initially for each topic. These items were then tested with faculty members in the School of Education, University of Colorado.

There were two main purposes of the pilot test. The first was to make certain that the items were understandable, unambiguous and provided a sufficient range of alternative answers to the multiple-choice items. The second purpose was to determine the perceived threat level of each item and of each group of items. All but four of the faculty members were asked to read each item and then rate it on a five-point scale on how threatening they thought it would be to faculty members at colleges and universities across the country.

Each questionnaire was divided randomly into thirds, and these thirds were recombined to form three new instruments so that a third of each original instrument was in each of the pilot test instruments. This was done so that there would be a combination of perceived threat level items in any one questionnaire.

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[1] Appreciation is expressed to Dr. Daryl Sander and Dr. Tom Shay, School of Education, University of Colorado, and Dr. Arliss Roaden, Dean of the Graduate School, The Ohio State University, for their advice in this stage of the development of the instruments.

[2] Appreciation is expressed to Dr. Joe Malik, Vice President, Grossmont College, El Cajon, California, for sharing many of the questionnaires in his instrument file with the authors.

Fifty of the fifty-four members of the School of Education faculty were then randomly divided into thirds, and each third received one of the "combination" questionnaires. Usable responses were received from 36 of the 50 persons, distributed 13, 13, and 10 across the three "combination" questionnaires. An average perceived threat level was computed for each item. Then, items were recombined by topic and an average perceived threat level was computed for each topic.

The four faculty members who were not asked to perform this task were asked to look at the three original pools of items (on role, governance, and control of higher education) and rank them (on how threatening they thought each overall questionnaire would be to faculty members) from first to third, with least threatening being first. Three professors complied with this request, and ranked the questionnaires in this order: least threatening - role of higher education; moderately threatening - governance of higher education; most threatening - control of higher education.

Based on these empirical tests of the perceived threat level of each item and each questionnaire, final selection of items for the three questionnaires was made. This was done by selecting from the pool of items on the role of higher education the forty items with the lowest perceived threat which could be logically combined to make a cohesive instrument. Then, a set of forty logically related items of medium perceived threat was selected from the pool of items on governance of higher education and a set of forty logically related items with the highest perceived threat ratings was selected from the pool of items on control of higher education. When this was done, the final perceived threat levels, on a five-point scale from "low threat" (1) to "high threat" (5), for each of the instruments were: (a) role of higher education - 2.27; (b) governance of higher education - 2.41; (c) control of higher education - 2.87. The twenty items for each of the short questionnaires on each topic were then drawn from the relevant set of forty items so that the same relative position on the threat continuum was maintained for each topic.

A check was performed to make sure that even though each of the instruments had the same number of items, they also took approximately the same amount of time to complete. The average time necessary to complete one of the forty-item questionnaires was 14 minutes and for the other two forty-item questionnaires, 15 minutes.

The next step in developing the questionnaires was to get the selected items to conform to the one- and three-page formats specified in the research design. It was hoped that all of the instruments could be printed on regular 8 1/2" x 11" paper, but even with photo-reduction it was impossible to get all of the forty items on front and back of one regular sheet. For that instrument only (the one-page forty-item instrument), the questionnaire was printed on legal size 8 1/2" x 14" stock. The one-page questionnaires were photo-reduced to fit on the front and back of one sheet of paper. Although the items for the three-page questionnaires could have been printed in normal type size on one side only of three regular sheets of paper, it was decided to have them photo-reduced also so that size of print would not be a confounding variable. All of the photo-reduction was at approximately the 30% level (i.e., all printing was approximately 70% as large as normal typing on an elite typewriter). Samples of each questionnaire are shown in Appendix A.

Development of the Cover Letters

Mention has been made in both Chapters 1 and 2 of the various types of appeal which might be made in cover letters to potential respondents. Appeals might be made to the respondent's scientific interest or to his sense of responsibility or professionalism to help increase the knowledge in a particular field. These types of appeal are referred to in the present study as professional in nature; that is, they are more or less extrinsic to the person as an individual. Any mention of personal contribution is limited to how it can aid a bigger, more generalized cause. Other appeals may be directed specifically at the individual, however. Examples of these are appeals to the respondent's perception that he or his response is important or to his willingness to help the investigator successfully complete a study. These appeals have been termed personal; they are very much intrinsic to the person.

The investigators attempted to assess the relative effectiveness of professional and personal appeals in eliciting responses to mailed questionnaires. Therefore, two separate cover letters were developed for inclusion in the initial mailing. The three cover letters (one for each of the three questionnaires: role, governance, and control of higher education) which employed the professional appeal were almost identical in content except for a few sentences in the first paragraph which dealt with the topic of the questionnaire. Similarly, except for a few sentences in the first paragraph, the three cover letters employing a personal appeal were identical in content.

One other variable was included in the cover letter, that of anonymity. In one cover letter, a paragraph stated that no name was required on the questionnaire and responses would be completely anonymous. In the other cover letter, a paragraph stated that the respondent's name was on the questionnaire to facilitate checking off incoming responses, but that the confidentiality of the responses would be maintained.

Combinations of the above variables resulted in 12 cover letters -- four cover letters (professional-anonymous, professional-nonanonymous, personal-anonymous, personal-nonanonymous) for each of the three questionnaires. Samples of those letters may be seen in Appendix B. It was necessary to manipulate one additional variable, personalization, with half of the sample receiving duplicated letters and half receiving typed letters. This increased the number of cover letters to 24.

The typed letters were produced individually on an IBM Magnetic Tape Selectric Typewriter (MTST), and the form letters were multilithed. All letters bore the name of the Laboratory of Educational Research, University of Colorado, on the letterhead. All copies of the individually typed letters were personally signed, while all copies of the multilithed letters had a facsimile signature. Thus, 2,304 persons received what appeared to be a personally typed and signed letter which was addressed to them by name, while the other 2,304 persons in the sample received a multilithed letter addressed to them as "Dear Colleague."

The professional-personal dichotomy was maintained in the first follow-up, with everyone receiving the same type of appeal he had received in the initial cover letter. No mention was made in the follow-up correspondence of anonymity of the respondents; however, those persons whose name had been written on the questionnaire in the initial mailing also received a questionnaire with their name written on it in the follow-up, while those persons whose name had not been included on the instrument in the initial mailing received a completely blank questionnaire in the follow-up. None of the correspondence in the first follow-up appeared personally typed; all of it began with the "Dear Colleague" salutation.

The professional-personal dichotomy was abandoned in the second follow-up. In this follow-up, which was a postcard only, a message which it was hoped was rather balanced in its appeal was used. Again, as in the first follow-up, all of the correspondence was mass-produced and of the "Dear Colleague" variety. Samples of all follow-up correspondence may be seen in Appendix C.

Assessment of Technical Adequacy of the Questionnaires

For confidence to be placed in results gathered in a research study utilizing a questionnaire, it is usually necessary for some information to be given on the instrument's reliability and validity. In this particular research study, however, normal considerations of reliability and validity of the questionnaires are unimportant. That is, for the purpose of this study it was not necessary to determine if respondents would answer items in the same way on a second administration of the questionnaire; the only interest was whether the questionnaire would be returned or not. By the same reasoning, it was not critical for the purpose of this study that the items in the questionnaires really dealt with the intended topics of interest. Therefore, neither reliability nor the typical kind of validity were of particular importance in this study.

There was another kind of validity that was important, however. That was the necessity to ascertain that the questionnaires did indeed represent different points on a continuum of perceived threat. One of the questions of interest was whether different levels of perceived threat affect response rate. Another question was whether certain techniques or combinations of techniques had a differential effect on response rates depending on the threat level of the questionnaire. Therefore, it was critical that the three questionnaires used in this study differ on perceived level of threat embodied in the content.

Tests of the threat levels of the individual items and preliminary tests of the threat levels of the entire questionnaires were described previously in the section on "Development of the Questionnaires." However, it was felt necessary to conduct a further check to see if the questionnaires (as printed) were viewed by a larger sample of professors as different in perceived threat levels. Accordingly, a random sample of sixty persons was drawn from the same National Faculty Directory which was used to draw the 4,608 persons in the main sample of the study. These sixty names were then randomly assigned to four groups: (a) one group of 15 persons received all three one-page twenty-item questionnaires; (b) one group of 15 persons received all three one-page forty-item questionnaires; (c) one group of 15 persons received all three three-page twenty-item questionnaires; and (d) one group of 15 persons received all three three-page forty-item questionnaires. The cover letter sent with the questionnaires explained the purpose of the study and asked for the cooperation of the person to whom it was addressed. The letters were multilithed with a "Dear Colleague" salutation. A stamped return postcard was enclosed on which the respondent could rate the three questionnaires on how threatening he thought the questionnaires would be to most faculty members throughout the country, using a five-point scale from "Not very threatening" (1) to "Very threatening" (5). Of the 60 persons in the sample, 21 responded. The average perceived threat levels for the three questionnaires were: (a) role of higher education - 1.19; (b) governance of higher education - 1.95; and (c) control of higher education - 2.76. An analysis of variance revealed that these means are significantly different from each other at the .001 level ($\underline{F} = 17.73$). Newman-Keuls tests showed that each mean is significantly different from each other mean at the .005 level. Thus, the validity of the perceived threat variable was established.

Since many articles have been written about how the response rate to a mailed questionnaire survey is dependent in part on how interesting the topic of study is to the respondents (see Toops, 1935), a check was made to see if the three questionnaires used in this study were similar in their level of interest. The same procedures as were used in the check on threat levels just described were used, except that the sample numbered one hundred rather than sixty and each of the four groups had 25 persons in it rather than 15. A different cover letter was developed to send to this sample, but it likewise gave the purpose of the study and asked for the respondent's cooperation in ascertaining how interesting the topic of each questionnaire was to faculty members. Again, a stamped return postcard was enclosed so that a rating could be made for each questionnaire from "Not very interesting" (1) to "Very interesting" (5). Of the 100 persons in the sample, 22 responded. The average level of interest for each of the questionnaires was as follows: (a) role of higher education - 3.05; (b) governance of higher education - 3.36; (c) control of higher education - 3.41. Unfortunately an ANOVA showed these means to be different as well ($p < .025$, $\underline{F} = 4.04$). Newman Keuls tests showed the governance and control questionnaires to be significantly different from the role questionnaire ($p < .005$ in both cases), but not significantly different from each other. The confounding effect of the interest variable makes it impossible to speak completely unequivocally about how varying perceived threat levels affect questionnaire response rates, without also considering the differences found in interest levels. However, the confounding was not as serious as it might have been, since two of the means were not significantly different from each other in interest level whereas the difference in perceived threat levels was significant for all three questionnaires. Thus, at least for the governance and control questionnaires, one may have confidence that the differences in response rates are not due to a difference in the interest level of the questionnaire content. Furthermore, the observed differences in interest are 25 times as likely to be attributable to chance than is true for the observed differences in threat. Therefore, differences in threat level are discussed throughout the remainder of this report, whereas differences in interest are discussed only where they seem especially cogent.

Copies of all correspondence related to these validity checks may be found in Appendix D.

Data Collection

Procedures for distributing the questionnaire to members of the sample and motivating them to return it are discussed in this section.

Initial Distribution and Follow-up Procedures

Cover letters, questionnaires, outgoing and return envelopes were collated so that the appropriate combinations of variables could be mailed to all respondents in the 576 cells. The initial distribution was made by first-class mail on April 4, 1972.

Approximately five weeks later, on May 10-12, 1972, follow-up correspondence was sent to nonrespondents in that portion of the research design where nonrespondents were intended to receive follow-up letters or postcards. Thus, approximately one-third of the nonrespondents received no follow-up, one third of them received a postcard with a mimeographed reminder, and approximately one-third of them received a multilithed letter with the same message as on the postcard, but with another copy of the questionnaire and an unstamped return envelope enclosed.

On June 16, 1972, approximately five weeks after the first follow-up was sent, a postcard reminder was sent to those persons who had received the first follow-up but who still had not responded.

Replacement of Persons in the Sample

Since some addresses in the *National Faculty Directory* were out of date, it was recognized that there would be a problem with questionnaires being returned as undeliverable. Also, a small proportion of the 4,608 persons in the original sample were expected to have died since printing of the directory. For these reasons, a pool of replacement names was maintained. As explained earlier in this chapter, the 459 names left from the drawing of the original sample were used for this purpose.

Questionnaires for 360 of the 4,608 persons in the original sample were returned as undeliverable. Replacements were drawn randomly and assigned to the cells from which the undeliverables had come. By April 24, 1972, it was assumed that most of those questionnaires which were going to be returned as undeliverable had been returned, and on that date, the appropriate combinations of cover letters, questionnaires, outgoing and return envelopes were sent to the 360 replacements.

It became evident that it could be a never-ending process to try to keep replacing those persons whose questionnaires had been returned as undeliverable. Of the 360 questionnaires sent to the first set of replacements, 33 were returned as undeliverable. Also, 203 follow-ups to the original sample and the 327 replacements who presumably received the initial mailing were returned; this caused some doubt as to whether the questionnaire itself had been delivered. A decision was made at that point to abandon the procedure of replacing names. Instead, for the 33 persons whose initial mailing was returned and for the 203 persons whose follow-up was returned, a probability technique was employed to estimate the likelihood of any particular person returning the questionnaire if he had received it. An example will best illustrate the procedure. Suppose that a person in a certain cell had his questionnaire returned as undeliverable. Of the seven persons remaining in the cell (who it is assumed received a questionnaire since none were returned as undeliverable) three had returned a completed questionnaire. That is, 43% of the persons receiving a questionnaire in that cell had returned it. Reference was then made to a random numbers table. If the first two-digit number encountered was 43 or below, the person was coded as having responded to the questionnaire, even though he had never received it. If the number was 44 or above, he was coded as not having returned the questionnaire. This technique in effect negated problems with the final set of undeliverables, enabling the probability of their having returned the questionnaire to be estimated in a way that neither systematically inflated or deflated percentages of returns in cells, but permitted retention of equal cell sizes (a necessity for the computer program used to analyze the data). Although this technique should introduce no bias into the data, it should be noted that it was applied to only 5% of the sample.

Table 2, shown below, is a tabular representation of the number of completed questionnaires returned, the number of questionnaires returned as undeliverable, and the number of follow-ups sent at each stage of the data collection process.

TABLE 2

The Original Sample and the Questionnaire Returns, by Category

Number of persons in original sample		4,608 (100%)	
Number of questionnaires completed and returned before 1st follow-up	1749 (38.0%)		
Number of questionnaires returned as undeliverable before 1st follow-up	360		
(Number of persons replaced before 1st follow-up)	360		
Number of persons who wrote to investigators and refused to respond before 1st follow-up	21		
Number of nonrespondents as of 1st follow-up (4608-1749-21)		2,838 (61.6%)	
Number not contacted in first follow-up (as dictated by research design)	931		
Number contacted by postcard	946		
Number contacted by letter	961		
Number of questionnaires completed and returned before 2nd follow-up (includes 1749 above)	2130 (46.2%)		
Number of questionnaires (and follow-ups) returned as undeliverable before 2nd follow-up	163		
Number of persons who refused to respond before 2nd follow-up (includes 21 above)	39		
Number of nonrespondents as of 2nd follow-up (4608-2130-163-39)		2,276 (49.4%)	
Number not contacted in 2nd follow-up	789		
Number contacted by postcard	1487		
Number of questionnaires completed and returned before final cut-off date (includes 2130 above)	2263 (49.1%)		Final Return Rate
Number of questionnaires (and follow-ups) returned as undeliverable before final cut-off date (includes 163 above)	203		
Number of persons who refused to respond before final cut-off date (includes 39 above)	43		

Questionnaire Returns

If the main concern in this study had been getting a high rate of return for each of the questionnaires, then the response rates which did occur would be viewed as disappointing. Fortunately, high return rates were not the goal. For this study, the number of nonrespondents was as important as the number of respondents. If there had been a uniformly high rate of response, little could have been said about the differential effect of the various techniques utilized. The 49% final response rate, however, should (at least theoretically) allow sufficient variation among the 576 cells to detect real differences in response rates among cells and combinations of cells.

Figure 2 is a graphic representation of the rate of response from April 10, 1972, one week after the initial mailing, to August 25, 1972, the cut-off date established for inclusion in the final analysis.

In some questionnaire studies, it is important to know whether all of the responses received were usable. Although it is recognized that a half-completed questionnaire may be of dubious interest where responses to individual items are important, any questionnaire returned with at least half of the items answered was counted as a usable response for the purpose of this study.

Nonrespondents

As was noted in the discussion of reliability and validity, there are certain things about the technical adequacy of a mailed questionnaire survey which should be checked if one is to have confidence in the results of the study. One such thing is a nonrespondent bias check to see if any factor(s) could have operated to cause one type of person to respond more readily than another type of person, thus biasing the results of the study. However, as with the typical reliability and validity concerns, attributes of the nonrespondents were not relevant in the present study. The investigators were interested only in the question of what techniques used to motivate responses, in a relatively homogeneous group of persons, would elicit the highest response rates. For that reason, no nonrespondent bias check was performed in the present study.

Processing of Responses

As the returns were received, they were checked off on a master list. It should be pointed out that although half of the questionnaires were supposedly anonymous, they were marked so that the identify of the respondent was known for check-off purposes. Upon completion of the data analyses, however, all identifying marks were removed so that none of the actual item responses could be traced to the respondents.

Before the first analysis (the fact that there were three analyses will be discussed later in this chapter), all 4,608 names were coded by identification number, descriptors of the cell in which the persons were placed,

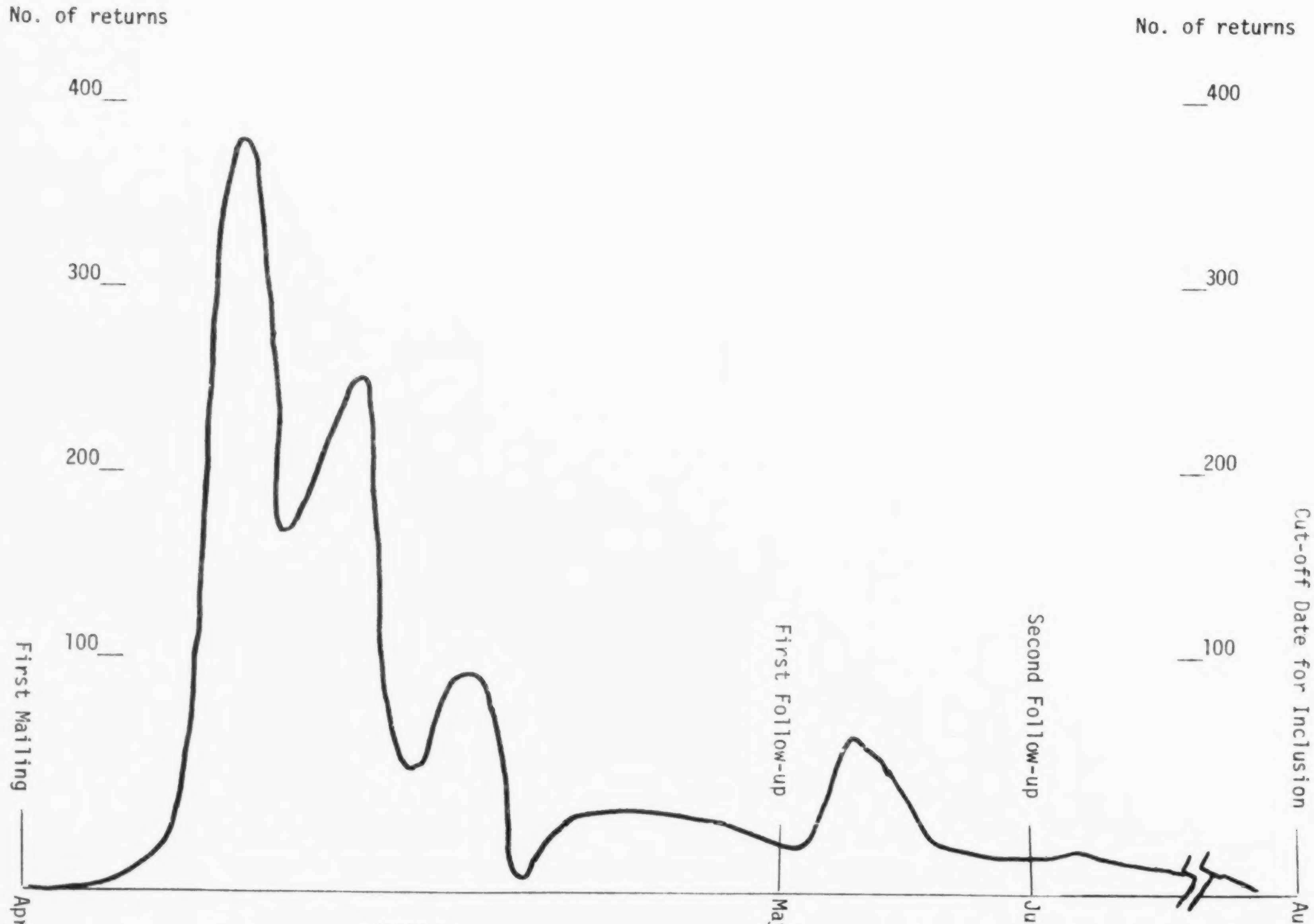

FIGURE 2
Smoothed Frequency Polygon Depicting Daily Rate of Questionnaire Returns

and whether they had returned a questionnaire or not. The data were transferred from the coding forms to computer cards by keypunchers at the University of Colorado Computing Center.

For each of the remaining analyses, the only necessity was to pull those computer cards of persons who had returned a questionnaire subsequent to the prior analysis. Those cards were repunched to show that a completed questionnaire had been returned and then reinserted in the data deck.

Statistical Treatment of the Data

The data were analyzed on three separate occasions: once before the first follow-up correspondence was sent, again before the second follow-up correspondence was sent, and finally after a previously established cut-off date. The three analyses were performed to provide guidance to researchers who lack sufficient time or money to allow three contacts with respondents (initial mailing and two follow-up contacts). In recognition of the fact that not all researchers have the luxury of three contacts, and in the possibility that techniques may have differential effect depending on the time of their use, the three analyses were intended to show which techniques were most effective in increasing return rates (a) if time and/or money allowed only one contact with respondents, (b) if an initial contact and one follow-up were made, and (c) if an initial contact and two follow-ups were made.

Both descriptive and inferential statistics were used in the analyses. The descriptive statistics consisted of the percentages of returned questionnaires accounted for by each of the techniques. The inferential technique utilized was analysis of variance (ANOVA).[3] Each person in the sample was coded as "1" if he returned the questionnaire and as "0" if he did not. The ANOVAs were run on these dichotomized data.[4] The Biomedical (BMD) computer program 08V was used to perform both the percentage counts and the ANOVAs.

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[3] In this study, all factors were classified as fixed. However, there are some problems associated with the denotation of the perceived threat level factor which raises questions about whether it should be considered a fixed or random factor. Persuasive rationale can be martialed for either position.

In arguing for threat to be considered a random factor, it can be noted that the three questionnaires used in the study differed not only in perceived threat, but also in topic. Questionnaire topic logically should be considered a random factor, since few persons who wish to gain useful information from this study are likely to be researching any of the particular three topics reflected in the content of the present questionnaires. Furthermore, the threat levels used in this study are not really replicable in other studies. They fall at three points on a continuum produced by a particular rating process by a particular group of raters. Therefore, there is an argument in favor of treating threat as a random factor so the results might be generalized to points on the continuum other than the three used herein, especially since the "level of threat" measure is not on a scale with direct external meaning, such as other factors in this study (e.g., length, defined as number of pages). By considering threat a random variable, generalization to other threat levels is possible and, to an extent, one could even be comfortable generalizing to other topics, since topic would also be automatically treated as a random variable. Finally, it could be argued that defining the threat factor as fixed would allow generalizations only to questionnaire threat level "like these" and on topics "like these," thus seriously reducing the utility of the results of the study.

When significant F-values were found in the ANOVAs, post hoc comparisons were utilized to show which differences accounted for the significant F-values. Using the guide recommended by Hopkins and Chadbourn (1967, p. 409), the Newman-Keuls test was chosen to make these multiple comparisons. The multiple comparisons were computed by the investigators with the aid of a desk calculator. Higher order interactions, where multiple comparisons would not be appropriate, were graphed to show the combinations which accounted for the significant differences.

Planned orthogonal contrasts were performed when necessary to answer some of the questions posed in Chapter 1 (e.g., the effect of typed vs. form cover letters).

The results of these analyses are presented in the next chapter.

The alternative argument in favor of considering threat a fixed factor is largely dependent on the position that it is completely illegitimate to consider threat a random factor since it fails to meet critical criteria for labeling a factor as random. Levels of a random factor are, by definition, selected randomly from a larger, known population of which one assumes the selected levels are representative. No such process led to the selection of the three threat levels used in this study; they were selected arbitrarily and three questionnaires were developed as vehicles for presenting high, medium, and low degrees of threat to respondents. The fact that the three questionnaires were tested and found to differ on threat as they were intended in no way invalidates the argument that threat cannot in this study be defended in the real sense as a random factor. The second argument in favor of treating threat as fixed in this study relates to the nature of generalizations one can make from the results when a variable is treated as fixed as opposed to when it is treated as random. The generalizations made from a random factor are mathematical in nature -- probabilistic statements about the extent to which results can be generalized to the population represented by the levels of the factor. Conversely, with a fixed factor, no such probabilistic generalizations are attempted beyond the prescribed levels. Generalizations made from any fixed factor to other levels of that factor can only be logical, informal generalizations, and cannot masquerade as precise, mathematical statements. In short, one cannot generalize mathematically from a fixed factor, but careful logical generalizations can be offered beyond the levels included in the study, thereby increasing the utility of the results for other researchers.

The present investigators admit some ambivalence about the decision to treat threat as a fixed factor; however, that decision seemed the most defensible choice in the present study. Threat is treated as a fixed factor throughout the body of this report. For the reader who finds the argument in favor of treating it as a random factor more compelling, all the analyses in this study have been repeated, with threat treated as a random factor and appropriate pooling procedures utilized. The results of those analyses are presented in Appendix F.

[4] Hsu and Feldt (1969, pp. 515-527) have demonstrated that the use of parametric analyses on such dichotomized data is legitimate.

Cost Analyses

For each of the main effects which involved expenditures of time or money, and for significant interactions, cost analyses were performed corresponding to the three analyses described above. Initial costs for each of the levels of factors were determined in this way: (a) production costs were determined by dividing the cost of a particular item (e.g., 3000 one-page questionnaires) to reach a cost per item (e.g., 2.2¢ for each one-page questionnaire); (b) the cost per item (2.2¢) was multiplied by the number of that item which was mailed in the initial mailing (2,304 one-page questionnaires) to obtain the initial cost for that item ($50.69); (c) a computation was then performed to determine how much money was spent per return based on how many questionnaire returns from the group receiving that item were received; the initial cost for the item was divided by the number of persons in the sample receiving that item who had returned a questionnaire. This computation resulted in a cost per returned questionnaire.

The results of these cost analyses are also presented in the next chapter.

CHAPTER 4

RESULTS AND DISCUSSION

In the preceding chapters, the problem under consideration has been stated, objectives and questions pertinent to that problem have been presented, and specific procedures for reaching the objectives and answering the questions have been outlined. A description of the results of this study and a discussion of those results are presented in this chapter.

This chapter is organized into four sections. In the first section a rationale for the analytic framework used in this study is presented. The second section includes data on the questionnaire response rates yielded by each variable and inferences are drawn from those data whenever appropriate. A discussion of the relative costs of the different variables is presented in the third section. Finally, in the fourth section, all of the results are discussed as they relate to the questions posed for this study.

Rationale for the Analytic Framework

It was mentioned in Chapter 3 that three separate analyses were performed on the data. These analyses represented three distinct points in time. The first analysis (Analysis 1) was performed when only the questionnaire returns from the initial mailing had been received. The second analysis (Analysis 2) was conducted when returns from the initial mailing and one follow-up had been received. The final analysis (Analysis 3) was conducted after returns from the initial mailing and two follow-ups had been received.

These three analyses were performed to provide guidance to survey researchers with differing amounts of time and money available to conduct their studies. In some cases, time and/or financial constraints allow only one contact with respondents. This is unfortunate, considering the research evidence in Chapter 2 regarding the effectiveness of follow-up contact in eliciting a higher response rate. Nevertheless, conditions may be such that the researcher has no alternative but to send an initial mailing and hope for the best response possible. Results from this study may help him to choose those variables which offer the best chance for a high response rate with a single contact.

The same rationale applies for the other two analyses. It is up to the researcher to determine whether or not he will be able to afford follow-up contacts, and if so, how many. After that decision has been made, he should consider the appropriate analysis of the three presented here.

The methods in this study which yielded the highest returns were not the least expensive methods (but neither, surprisingly, were they the most expensive). A word of caution should be given at this time. It would be tempting to choose certain methods of conducting a questionnaire survey simply because they are the least expensive. However, without taking into account the return rate percentage associated with those methods, this would be a foolhardy choice. Without a high response rate, the results of the survey can be almost worthless. The lower the response rate, the less likely respondents are to be representative of the sample to which the questionnaire was sent and, hence, representative of the population from which that sample was drawn. Although nonresponse bias checks may partially eliminate this problem, they are almost never completely satisfactory. Therefore, a decision to accept a lower response rate simply to save money may well result in a low rate of return and an unrepresentative group of respondents, thus invalidating the entire study.

The results presented in this chapter are not "promises" for high returns. They are simply intended to be used as guides so the researcher can choose the combination of variables which is optimal in terms of increasing response rate, and which he can afford, based on the assumption that variables and combinations of variables which operated in the present study to increase response rate would operate similarly in his study. To the extent that such studies tested the assumption, they would provide a useful replication of the present study.

Results: Response Rates Yielded by Experimental Variables

These data are presented separately for each of the three analyses. Complete tables of response rates are presented in Appendix E. Discussions of each of the main effects and all of the significant interactions are also included in this section.

An alpha level of .05 was set for determining significance of $\underline{F}$-ratios for main effects. The alpha level for interactions was set at .01, however, because of the increased probability of making Type I errors with the large number of interactions (58) in the completely crossed design for this study (shown in Figure 1, Chapter 3).

Although the more conservative alpha rate was chosen for determining which interactions will be interpreted herein, all main effects and interactions with $p < .05$ are noted in the tabular presentations in this chapter for those readers who do not share this concern for Type I errors. The data provided in Appendix E could also be used by readers to graph any interactions not graphed and interpreted herein.

Analysis after Initial Mailing (Analysis 1)

The response rate for the three questionnaires after the initial mailing was 38% (39.2%, 37.5%, and 37.2% for the role, governance, and control questionnaires, respectively). The analysis of variance table for all six main effects and those interactions with an alpha level of .05 or greater is presented in Table 3.

TABLE 3

Analysis of Variance of Return Rates
Due to Experimental Variables: Analysis 1

Source	SS	df	MS	F	p[a]
questionnaire (Q)	.3607	2	.1803	.79	n.s.
cover letter (C)	2.0493	3	.6831	2.95	.05
follow-up (F)	.2461	2	.1230	.53	n.s.
stamp (S)	.2086	1	.2086	.91	n.s.
length (L)	2.0788	3	.6929	2.99	.05
anonymity (A)	.1356	1	.1356	.58	n.s.
CS	2.6482	3	.8827	3.81	.01
SL	1.9034	3	.6345	2.74	.05
CFS	3.2678	6	.5446	2.35	.05
QCL	7.0360	18	.3909	1.69	.05
CFLA	6.9848	18	.3880	1.68	.05
QCFLA	12.8394	36	.3567	1.54	.025
Respondent (QCFSLA)	933.1250	4032	.2314	-	-

[a] The caution made earlier should be reiterated: Readers should view cautiously the interactions at the .05 and .025 level, since the probability of Type I errors is magnified by the large number of interactions (58) tested for significance. This caution does not apply to main effects.

Apparently, the differing threat levels of the three questionnaires (as noted in Chapter 3) did not cause differing response rates. Of course, the greater interest levels of the two more threatening questionnaires may have compensated somewhat for the greater perceived threat, thus cancelling the effect of the threat level. It is impossible to know from these data, however, how the response rates would have differed among the three questionnaires if the interest level had been kept constant.

The different cover letters showed a significant difference in the response rates they elicited. The response rates for the four cover letters were as follows:

typed letter personal appeal - 41.4%
form letter personal appeal - 37.4%
typed letter professional appeal - 37.3%
form letter professional appeal - 35.7%

A Newman-Keuls test revealed that the comparison contributing most to the significant difference was between the typed personal appeal letter (41.4% response rate) and the form professional appeal letter (35.7% response rate). This difference of 5.7% was significant at the .025 level. No other Newman-Keuls comparisons between two means were significantly different.

Planned orthogonal contrasts were performed to test the effect of typed letters vs. form letters and personal appeal vs. professional appeal. Both contrasts were significant at the .05 level (F-ratios of 3.96 and 4.21, respectively). In increasing response rates with a single mailing, typed letters were found to be more effective than form letters and a personal appeal was found to be more effective than a professional appeal.[1]

The follow-up variable was irrelevant in Analysis 1, since no follow-up contact had yet been made. Therefore, it seems reasonable to view the interactions involving the follow-up variable listed in Table 3 as definite Type I errors, since the random assignment of respondents to the three levels of follow-up should have insured nearly equal response rates from the three groups before a follow-up was sent. That the three groups, in interaction with other variables, did show some differences can be attributed to chance error.

Perhaps the most important result in this first analysis was the fact that 38.6% of the respondents who received a stamped return envelope returned a questionnaire while 37.3% of the respondents who received an unstamped return envelope returned a questionnaire. The difference in these two response rates was not significant. It should be recognized that many of the respondents no doubt had free mailing privileges through their colleges and universities. An accurate count of the number of respondents with such privileges could not be kept, but it is reasonable to assume that many of the persons who were forced to pay their own postage to return their questionnaire simply used their schools' stamps or postage meter. This part of the study should definitely be replicated to see if the result is maintained when the respondents must pay their own postage. If the same result is found, the researcher would save a great deal of money without sacrificing a significant amount in response rates. In any event, it is important to note that apparently a stamped return envelope is not an effective inducement with college and university faculty members when questionnaires are sent to their office addresses.

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[1] Readers are referred to Chapter 3 for a description of the variables discussed in this chapter.

Questionnaire length showed a significant difference in this first analysis ($p < .05$). The response rates for the four levels of this factor were:

1 page 20 items - 41.3%
1 page 40 items - 36.5%
3 pages 20 items - 38.2%
3 pages 40 items - 35.9%

A Newman-Keuls test showed the difference between 41.3% and 35.9% to be significant at the .05 level, and the difference between 41.3% and 36.5% also significant at the .05 level. These findings were strengthened by the results of planned orthogonal contrasts. The one-page questionnaires did not elicit significantly more responses than the three-page questionnaires, but the twenty-item instruments were returned more often than the forty-item questionnaires ($p < .025$).

The guarantee of anonymity apparently did not make much difference to respondents in terms of response rate. Of those persons who were promised anonymity, 37.4% returned questionnaires, while those persons whose name appeared on the questionnaire had a 38.5% response rate. That difference was not significant. However, there may be great practical significance in the knowledge that lack of anonymity does not decrease response rates of college and university professors on typical higher education questionnaires. Record-keeping for follow-up mailings may be greatly simplified by this procedure. A word of caution should be noted here. Simply because there was no difference in response rate for the anonymous and nonanonymous groups does not mean there was no difference in the way items in the questionnaires were answered. The determination of those differences was not the purpose of this study. The reader should keep in mind, however, that such a possibility does exist.

The only interaction which was significant at the .01 level was that of stamp with cover letter. That interaction is graphed below in Figure 3. As can be seen from the graph, response rates across cover letters are quite similar for stamp and no stamp on the return envelope except for the typed letter with a personal appeal. With that cover letter, the inclusion of a stamped return envelope helped elicit a considerably higher response rate. It is conceivable that respondents who were approached with the "I need your help" tone of the cover letter considered the researcher more sincere in his request if he also cared enough about a response to enclose a stamped return envelope. It should also be noted that if one collapsed across levels of variables, it would be seen that a stamped return envelope elicits a higher response rate than an unstamped envelope with a typed letter but a lower response rate than an unstamped envelope with a form letter. An unstamped return envelope elicits about the same response rate with both a typed and a form letter. Also, collapsing across the personal/professional dichotomy shows that the highest response rates are elicited by the personal appeal with a stamped return envelope enclosed.

In summary, it would appear that the researcher who can afford just one contact with respondents would be well advised to send a personnally typed cover letter rather than a form letter, to use a personal appeal in

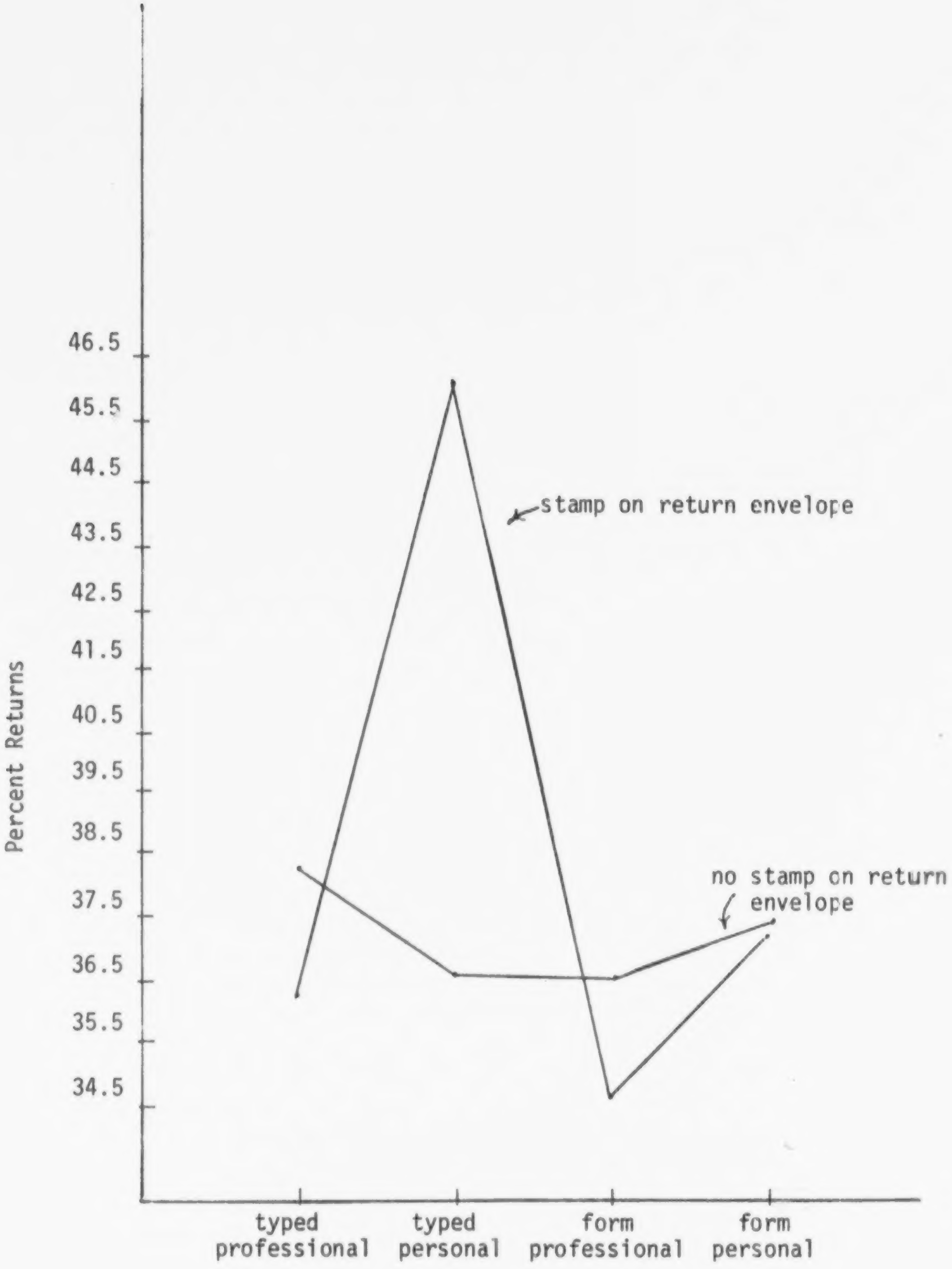


FIGURE 3

Cover Letter by Stamp Interaction: Analysis 1 that letter rather than a professional appeal, and to enclose a stamped return envelope. (Note that although the main effect of stamp was not *significant, it interacted with both the typed letter and personal* appeal to yield higher response rates.) The assurance of anonymity would not appear essential for increasing response rate per se; but the shorter (in terms of number of items) the questionnaire could be, the better the response rate which could be expected.

Analysis after Initial Mailing and 1 Follow-up (Analysis 2)

The analysis of variance table for the analysis after the initial mailing and one follow-up is presented below in Table 4.

TABLE 4

Analysis of Variance of Return Rates
Due to Experimental Variables: Analysis 2

Source	SS	df	MS	F	p[a]
questionnaire (Q)	.8138	2	.4069	1.654	n.s.
cover letter (C)	2.0773	3	.6924	2.815	.05
follow-up (F)	4.2982	2	2.1491	8.736	.001
stamp (S)	.4592	1	.4592	1.867	n.s.
length (L)	1.0998	3	.3666	1.490	n.s.
anonymity (A)	.5000	1	.5000	2.032	n.s.
FS	1.9640	2	.9820	3.992	.025
QCL	8.7878	18	.4882	1.984	.01
QFL	5.8420	12	.4868	1.979	.025
CSL	5.2075	9	.5786	2.352	.025
QSA	1.5161	2	.7580	3.081	.05
SLA	3.1528	3	1.0509	4.272	.01
CFSA	3.1949	6	.5325	2.165	.05
Respondent (QCFSLA)	992.0000	4032	.2460	-	-

[a] The caution made earlier should be reiterated: Readers should view cautiously the interactions at the .05 and .025 level, since the probability of Type I errors is magnified by the large number of interactions (58) tested for significance. This caution does not apply to main effects.

At the time of this analysis, 46.2% of the questionnaires had been returned. Again, there were no significant differences among the three questionnaires. The "role" questionnaires had a response rate of 47.9%; the "governance" questionnaire a response rate of 46.2%; and the "control" questionnaire a response rate of 44.6%.

Also, the cover letter which a respondent received again seemed to influence his tendency to return a questionnaire. Response rates for the four levels of the cover letter were:

typed letter personal appeal - 49.5%
form letter personal appeal - 46.3%
typed letter professional appeal - 45.6%
form letter professional appeal - 43.6%

The difference between 49.5% and 43.6% is significant at the .025 level by the Newman-Keuls method, but no other comparisons were significantly different. Planned orthogonal contrasts again showed that a typed letter elicited a higher response rate than a form letter ($p < .05$) and a personal appeal yielded a better return rate than a professional appeal ($p < .025$). It should be noted that comparisons in Analysis 2 and comparisons in Analysis 1 are not independent. Almost 82% of the responses in Analysis 2 were the same as in Analysis 1 (i.e., the only differences were due to the relatively small group of respondents who returned questionnaires between the two analyses. This has obvious implications for tracing any one main effect across Analyses 1, 2, and 3.)

In this analysis, the effect of the follow-up was striking; it was by far the most potent factor in generating additional responses between Analysis 1 and Analysis 2. Response rates for the three levels of this variable were:

no follow-up - 43.4%
follow-up postcard - 44.9%
follow-up letter and questionnaire - 50.5%

A Newman-Keuls test showed the differences between 50.5% and 43.4% and between 50.5% and 44.9% both to be significant at the .005 level. The difference between 44.9% and 43.4% was not significant. Since the message was the same on the postcard and in the letter, one can conclude that it was the addition of another questionnaire and return envelope (not stamped) that contributed to the increased response rate associated with the group receiving a follow-up letter.

The addition of a stamp to the return envelope in the initial mailing still failed to yield a significantly higher response rate after one follow-up mailing. The response rate for Analysis 2 was 47.2% with a stamp in the initial mailing and 45.2% without a stamp in that mailing. Again, it should be noted that the no stamp response rate was probably inflated to some unknown degree by the free mailing privileges which many professors at colleges and universities enjoy.

The length factor, which showed a significant difference at the time of Analysis 1, was not significant in Analysis 2. Response rates for the four levels were;

1 page 20 items - 46.3%
1 page 40 items - 45.9%
3 pages 20 items - 44.2%
3 pages 40 items - 48.5%

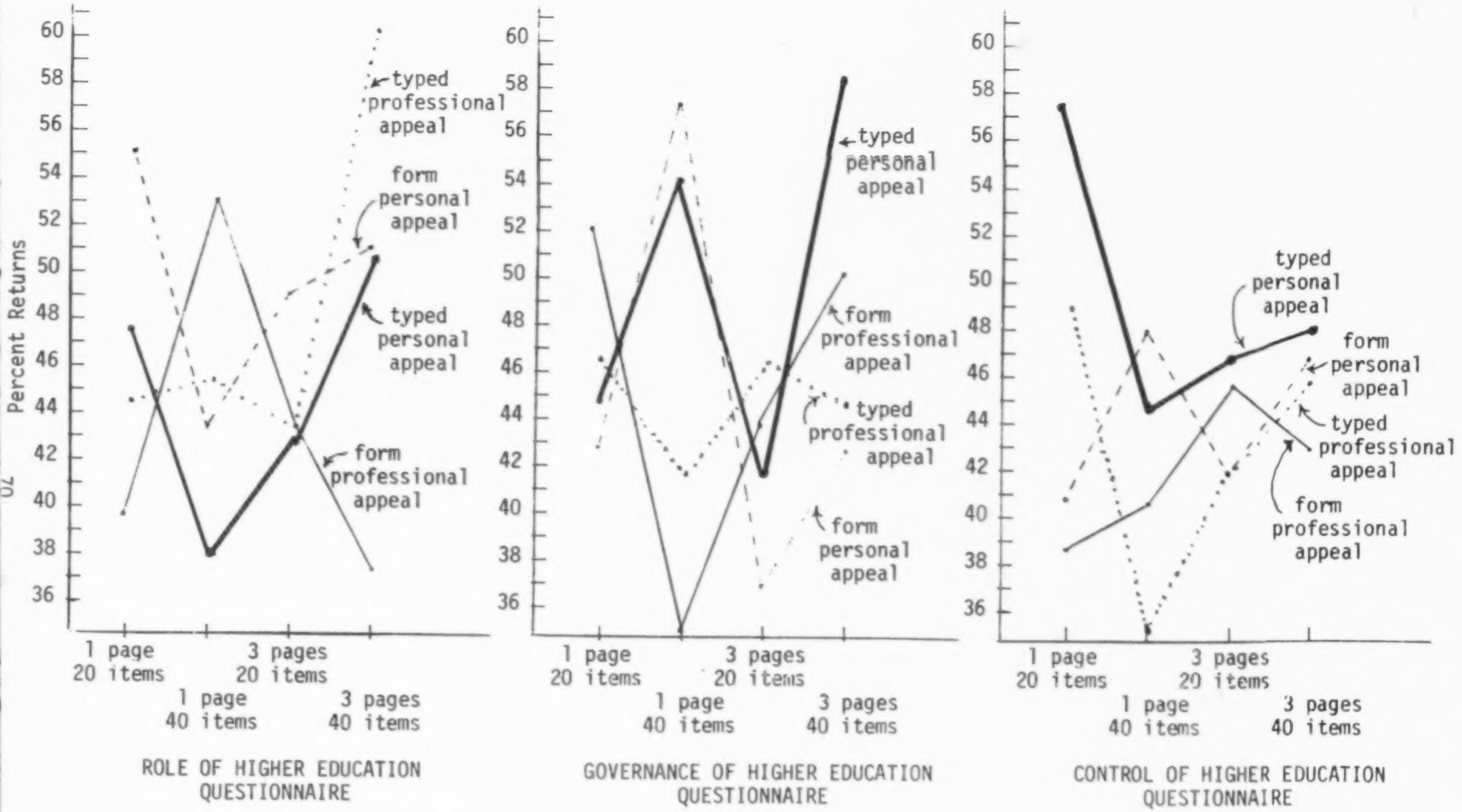
Planned orthogonal contrasts did not show a significant difference between one and three-page questionnaires or between twenty and forty items. Evidently, the follow-up request was effective enough to result in returns of sufficient numbers of 40 item questionnaires to reduce the Analysis 1 difference attributable to item number.

The assurance of anonymity again did not cause response rates to be significantly higher. The response rates were 47.3% and 45.2% for anonymous and nonanonymous, respectively.

Two interactions were significant at the .01 level in this analysis. They are shown below in Figures 4 and 5. Figure 4 is representative of the questionnaire by length by cover letter interaction; Figure 5 shows the stamp by length by anonymity interaction. Although both graphs are empirically meaningful (e.g., the highest response rate in Figure 4 was elicited by a three-page, forty-item questionnaire on the role of higher education and accompanied by a personally typed letter with a professional appeal), neither interaction was logically interpretable to the investigators or their colleagues. That is, *why* should a three-page, forty-item questionnaire obtain the best response? The reader is left to ponder the causation of the results presented in the graphs.

Analysis after Initial Mailing and 2 Follow-ups (Analysis 3)

The final return rate, averaged across the three questionnaires, was 49.1%. The analysis of variance table for the final analysis is presented in Table 5.



ROLE OF HIGHER EDUCATION QUESTIONNAIRE

GOVERNANCE OF HIGHER EDUCATION QUESTIONNAIRE

CONTROL OF HIGHER EDUCATION QUESTIONNAIRE

FIGURE 4

Questionnaire by Length by Cover Letter Interaction: Analysis 2

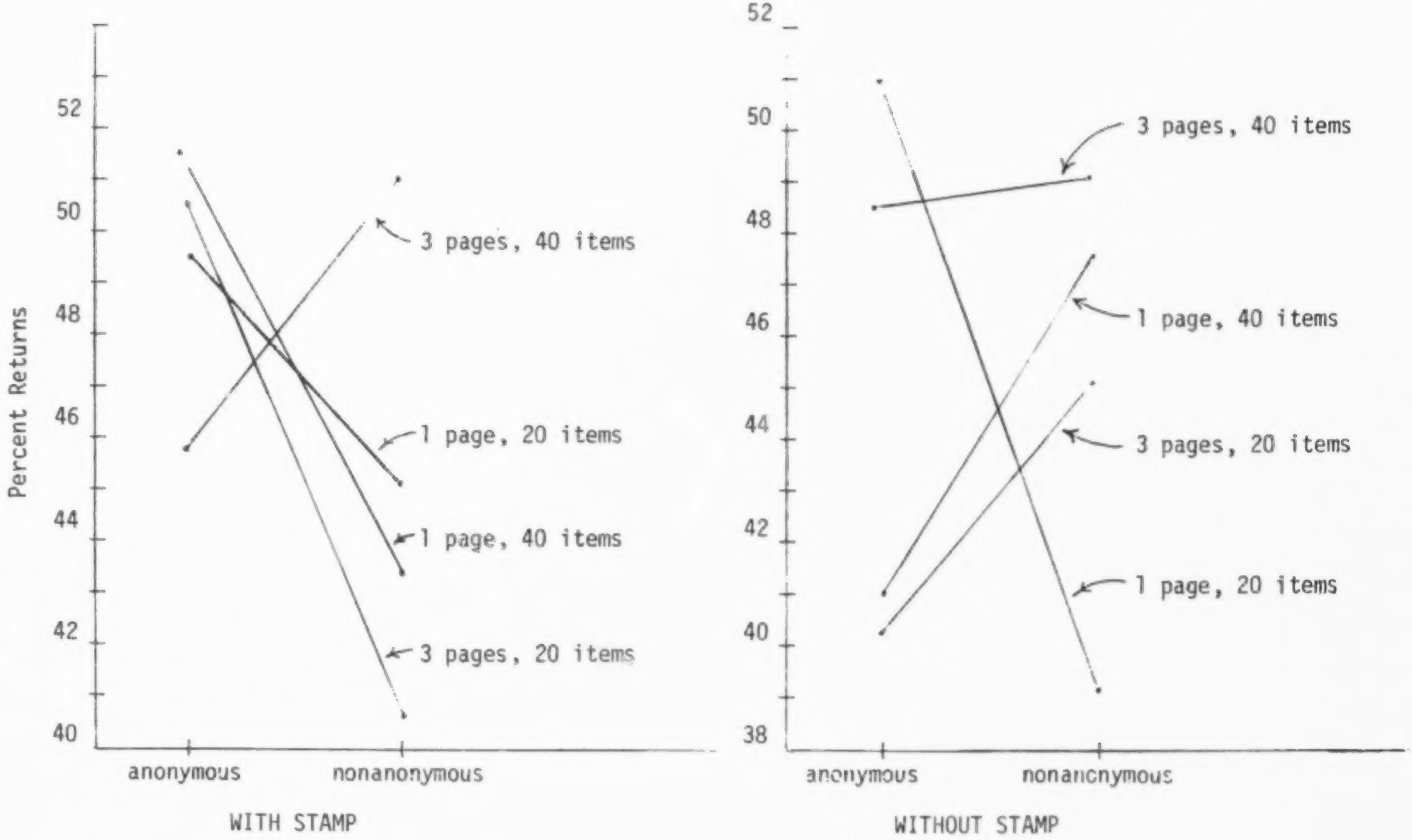


FIGURE 5

Stamp by Length by Anonymity Interaction: Analysis 2

TABLE 5

Analysis of Variance of Return Rates Due to Experimental Variables: Analysis 3

Source	SS	df	MS	F	p[a]
questionnaire (Q)	.5226	2	.2613	1.061	n.s.
cover letter (C)	1.8809	3	.6270	2.546	n.s.
follow-up (F)	9.6254	2	4.8127	19.540	.001
stamp (S)	.3648	1	.3648	1.481	n.s.
length (L)	.8201	3	.2734	1.110	n.s.
anonymity (A)	.3301	1	.3301	1.340	n.s.
FS	1.6202	2	.8101	3.289	.05
LA	2.5041	3	.8347	3.389	.025
QCL	7.5017	18	.4168	1.692	.05
QFL	5.6163	12	.4680	1.900	.05
QSL	3.5399	6	.5900	2.395	.05
CSL	4.4238	9	.4915	1.995	.05
SLA	3.2142	3	1.0714	4.350	.005
CFSA	3.3945	6	.5658	2.297	.05
Respondent (QCFSLA)	993.1250	4032	.2463	-	-

[a] The caution made earlier should be reiterated: Readers should view cautiously the interactions at the .05 and .025 level, since the probability of Type I errors is magnified by the large number of interactions (58) tested for significance. This caution does not apply to main effects.

The final response rates for the three questionnaires were as follows:

role of higher education - 50.5%
governance of higher education - 49.0%
control of higher education - 47.9%

None of the differences were significant.

The four combinations of type of appeal and form of reproduction in the initial cover letter showed no significant differences, either in the *F*-test or in the planned orthogonal contrasts. The response rates for the four cover letters were:

typed letter personal appeal - 52.4%
form letter personal appeal - 48.5%
typed letter professional appeal - 48.5%
form letter professional appeal - 47.0%

The three different follow-up procedures were found to differ significantly from one another, with an F-test showing overall significance at the .001 level. The return rates for the three levels were:

no follow-up - 44.2%
postcard on follow-up 1 and 2 - 47.9%
letter and questionnaire on follow-up 1, postcard on follow-up 2 - 55.2%

Newman-Keuls tests showed: (a) the difference between 55.2% and 44.2% to be significant at the .005 level, (b) the difference between 55.2% and 47.9% to be significant at the .005 level, and (c) the difference between 47.9% and 44.2% to be significant at the .05 level. Thus, it would appear that any follow-up is better than no follow-up, although the inclusion of another copy of the questionnaire in at least one of the follow-ups is most beneficial.

Again, the inclusion of a stamped return envelope in the initial mailing did not increase response rates appreciably over time. The group receiving a stamp had a response rate of 50.0% and the group with no stamp had a response rate of 48.2%.

Similarly, there were no significant differences among the four levels of the length factor, either in the F-test or in the planned orthogonal contrasts. Response rates were:

1 page 20 items - 49.7%
1 page 40 items - 48.7%
3 pages 20 items - 47.2%
3 pages 40 items - 50.9%

On the anonymity variable, 50.0% of those persons who were assured anonymity returned questionnaires while 48.3% of those persons who were not assured anonymity returned questionnaires. This difference was not significant.

Only one interaction was significant at or beyond the .01 level. That interaction was between stamp, anonymity, and length. It will be remembered that the same interaction was significant in Analysis 2. The interaction is graphed in Figure 6. The interaction showed the same general configuration as it did in the earlier analysis, and again the investigators were stymied in their attempt to logically explain *why* the response rates occurred as they did. Readers are invited to advance any explanations they are able to extract from these data.

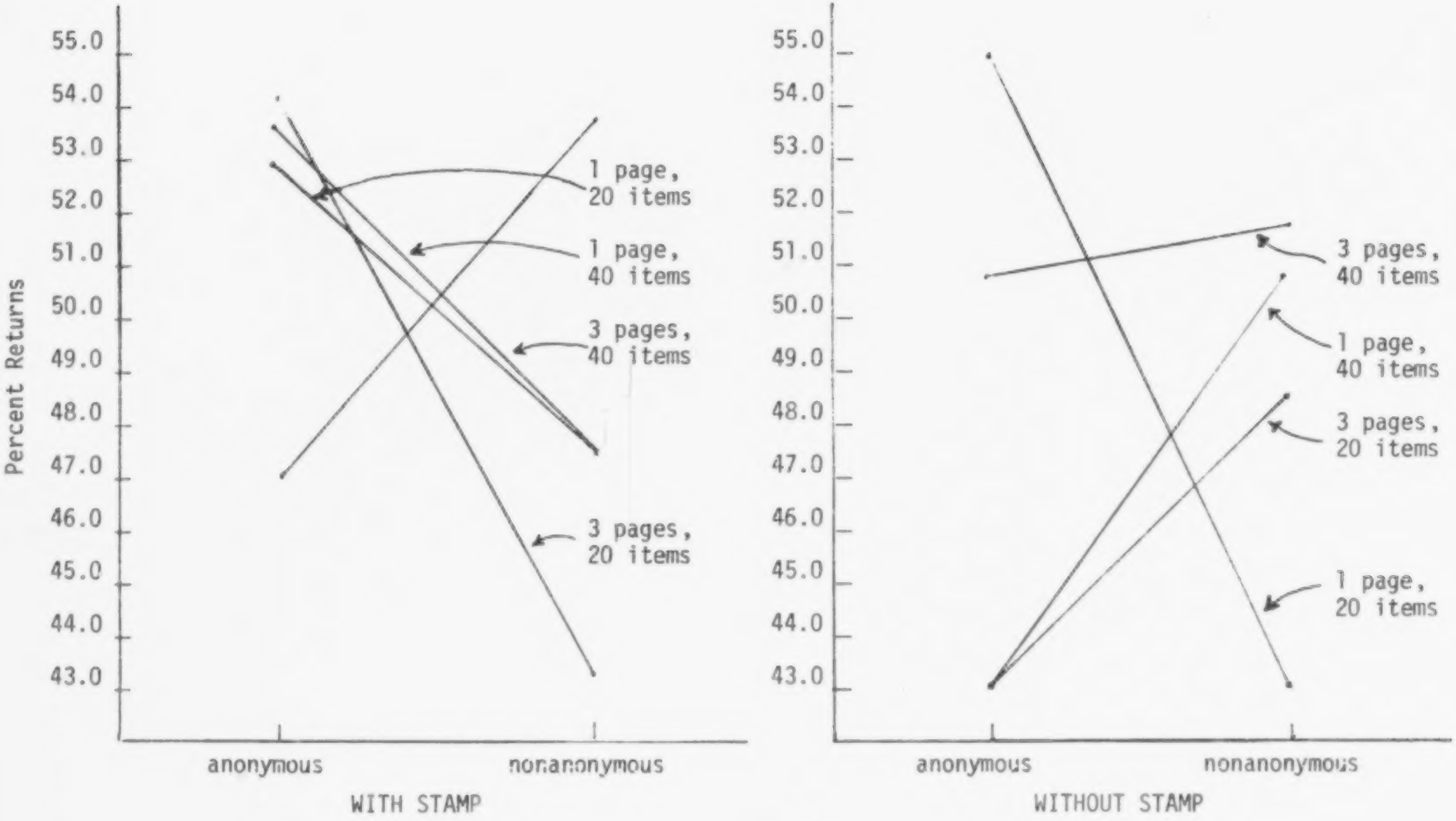


FIGURE 6

Stamp by Length by Anonymity Interaction: Analysis 3

Summary of Response Rate Data

Looking across the three analyses, one can trace the influence of different variables at different points in time. Generally speaking, the follow-up variable was the most potent. Secondarily, the cover letter and length factors showed significant differences among response rates in Analysis 1 (both variables) and Analysis 2 (cover letter only). Questionnaire threat level, stamped return envelope, and anonymity (when viewed singly as main effects) did not seem to have much effect on response rates in any of the analyses. However, some of these variables did contribute to significant interactions. More detailed discussion of these results will be found later in this chapter when the results are discussed in relation to the study questions. In the following section, cost analyses are provided for the data just presented.

Cost Analyses

The procedures for computing the cost data which are presented in this section were outlined in Chapter 3. It will be remembered that the basic steps for computing costs for each factor were: (a) determine the production costs for each item (e.g., the cost of each one-page questionnaire); (b) determine the initial cost per mailing for that factor (e.g., 2,304 one-page questionnaires cost $50.69); (c) determine the cost per returned questionnaire for that factor by dividing the initial cost by the number of questionnaires with that item returned. Again, separate cost data are presented for each of the three analyses.

The questionnaire threat and anonymity variables had no extra costs associated with them. No extra time expenditure was encountered as a result of which questionnaire was sent. The time required to write a respondent's name on the questionnaire was balanced by the time necessary to mark the anonymous questionnaires in such a way that they could be identified when they were returned. Therefore, neither the questionnaire nor the anonymity factor will be discussed in these cost analyses.

Cost Analysis for Analysis 1

Length. It cost 2.2¢ to reproduce each of the 2,304 one-page questionnaires, resulting in an initial cost of $50.69. Eight hundred ninety-six of those questionnaires were returned, so the cost for reproduction per returned one-page questionnaire was 5.7¢. The three-page questionnaires cost 6.3¢ each. Again, 2,304 were mailed and 853 were returned, resulting in a reproduction cost per returned questionnaire of 17.0¢.

Cover Letter. The typed letters were produced on an MTST typewriter, as indicated in Chapter 3. The average cost (in the Boulder area) for the services of such a typewriter and an MTST operator was $5.00 per hour. Different machines could type different numbers of letters in an hour, but the average was 18 letters per hour. Including typing costs and the cost of letterhead bond, each of the 2,304 personally typed letters cost 28.8¢.

Each form letter cost 1.0¢ each (that duplicating cost is based on at least 35 copies being made). Therefore, the total initial costs for the two types of letter were $663.55 and $23.04 for the typed and form letters, respectively. Returns for the two types of letter were 908 and 841, resulting in a reproduction cost per returned questionnaire of 73.1¢ for the typed letter and 2.7¢ for the form letter.

Return Envelope. With a regular first class stamp (8¢) attached, each return envelope cost a total of 8.5¢. Stamped return envelopes were sent to 2,304 persons, resulting in an initial cost of $195.84. Since 889 questionnaires were returned, the cost per returned questionnaire for stamped return envelopes was 22.0¢. With an unstamped return envelope, the cost for each of the 2,304 envelopes was .5¢ and the total initial cost was $11.52. Of the 2,304 questionnaires sent with unstamped return envelopes, 859 were returned, resulting in a cost per returned questionnaire for unstamped return envelopes of 1.3¢.

Follow-up. At the time of Analysis 1, no follow-up correspondence had been sent. Therefore, no cost figures were computed for the variable at this time.

Significant Interactions. The only significant interaction, it will be remembered, was the stamp by cover letter. The stamped return envelope and typed letter with a personal appeal appeared to elicit a higher response rate than might have been expected if there had been no interaction. The cost factor for each returned questionnaire from that particular combination was therefore less than might have been expected on the basis of the simple combination of costs of the two main effects.[2]

Each cell in this interaction is presented in Table 6 with the percent return in the upper half of the cell and the cost per returned questionnaire in the lower half. The two cells shown in each quarter of the table had identical initial costs, so the cost per returned questionnaire figure is simply a result of the percent of questionnaires returned. The initial costs were determined by adding the cost per mailing for each of the two variables involved (stamp and cover letter) and multiplying by the number of persons in each cell (576 in this case). The cost data reported for this interaction are only for those factors which entered in the interaction. The reader should keep in mind that additional cost would also be required for the inclusion of a questionnaire (either one or three pages) in order to make a complete mailing. Thus the initial costs would be increased by $12.67 for a one-page questionnaire and $36.29 for a three-page questionnaire. Since no significant differences in response rates were found between one- and three-page questionnaires, the one-page questionnaire would be

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[2] That is, one might have expected a cost of 95.1¢ per returned questionnaire (22.0¢ for a stamped envelope plus 73.1¢ for a typed letter) if no interaction had been present. However, given the larger rate of return of 46.2%, the actual cost per return on these two variables was 80.8¢.

TABLE 6

Costs Associated with Interaction of
Stamp by Cover Letter: Cost Analysis 1

		Cover Letter			
		typed professional appeal	typed personal appeal	form professional appeal	form personal appeal
Return Envelope	Stamp	36.3	46.2	34.7	37.3
		$1.028	80.8¢	27.4¢	25.4¢
	No Stamp	38.4	36.6	36.6	37.5
		76.4¢	80.0¢	4.1¢	4.0¢

recommended for inclusion in the mailing. Likewise, the cost of the outgoing envelope and stamp were not included in the costs presented here since those costs were the same for all 4,608 questionnaires that were mailed. Readers should realize, however, that represents an additional cost which must be counted when planning a budget for a mailed questionnaire survey.

Summary of Cost Analysis 1. A summary of the costs noted above is given in Table 7. It is important to look at the "Percent Return" column as well as the "Cost per Return" in view of the earlier argument that the higher the percent of returns, the more valid the results of the survey. The investigator must weigh the percent return against the cost per return and choose what appears to be the optimal balance.

TABLE 7

Cost Analysis for Analysis 1

Variable	N Mailed	Total Initial Cost	Cost per Mailing	% Return	Cost per Return
1. length					
a. 1 page	2304	$ 50.69	2.2¢	38.9	5.7¢
b. 3 pages	2304	$145.15	6.3¢	37.0	17.0¢
2. cover letter					
a. typed	2304	$663.55	28.8¢	39.4	73.1¢
b. form	2304	$ 23.04	1.0¢	36.5	2.7¢
3. return envelope					
a. with stamp	2304	$195.84	8.5¢	38.6	22.0¢
b. without stamp	2304	$ 11.52	.5¢	37.3	1.3¢
4. stamp by cover letter					
a. typed professional appeal and stamp	576	$214.85	37.3¢	36.3	$1.028
b. typed personal appeal and stamp	576	$214.85	37.3¢	46.2	80.8¢
c. form professional appeal and stamp	576	$ 54.72	9.5¢	34.7	27.4¢
d. form personal appeal and stamp	576	$ 54.72	9.5¢	37.3	25.4¢
e. typed professional appeal and no stamp	576	$168.77	29.3¢	38.4	76.4¢
f. typed personal appeal and no stamp	576	$168.77	29.3¢	36.6	80.0¢
g. form professional appeal and no stamp	576	$ 8.64	1.5¢	36.6	4.1¢
h. form personal appeal and no stamp	576	$ 8.64	1.5¢	37.5	4.0¢

NOTE - These cost figures are applicable only for mailings in the quantities indicated. Anonymity, questionnaire content, and outgoing envelope are not included here since their levels did not differ in cost.

Cost Analysis for Analysis 2

The initial costs of all of the variables were identical in Analysis 2 to the initial costs presented for Analysis 1 above. However, new cost per return figures resulted from increased percentage returns by the time of this analysis. All percent returns noted below are cumulative percents -- i.e., the returns from the initial mailing are included. The follow-up, which was not discussed in the section above, was a cost-laden factor at this time, so the cost for the three levels of the first follow-up are noted below.

Follow-up. There were no additional costs for the one-third of the sample who received no follow-up.[3] The research design specified that one-third of the sample, 1,536 persons, would receive a follow-up postcard. Of these 1,536, 587 questionnaires were returned after the initial mailing. It was therefore necessary to send only 946 postcards. The postcards cost 9.8¢ each to produce, so the total initial cost was $92.71. The additional responses received from this follow-up mailing numbered 103. Therefore, the cost per additional return was $92.71 divided by 103, or 90.0¢. It cost 17.2¢ to send a follow-up letter and another questionnaire to the 961 nonrespondents in the final third of the sample. Thus, the initial cost was $165.29. Two hundred questionnaires were received from this group after the follow-up had been mailed, so the cost per returned questionnaire was 82.6¢. Although considerably more expensive per mailing, the cost per return was somewhat lower here than for the postcard follow-up.

Significant Interactions. Tables 8 and 9 contain the percent returns (in the top half of each cell) and the cost per returned questionnaire (in the bottom half) for the two interactions which were significant in this analysis: questionnaire threat by cover letter by length (Table 8) and length by stamp by anonymity (Table 9). As in Table 6, the cells enclosed by double lines had identical initial costs. Again, it should be noted that additional costs would be incurred in order to make complete mailings. In the first analysis, the return envelope is missing. Since no significant differences were noted between stamp and no stamp groups, the much less expensive unstamped return envelope would be recommended. In the second interaction, the cover letter factor is not included. The typed cover letter, which produced significantly more returns, would add a considerable amount to the initial costs reported here.

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[3] It should be noted that 73 additional questionnaires from the group receiving no follow-up were received between Analysis 1 and Analysis 2.

TABLE 8

Costs Associated with Interaction of
Questionnaire Threat by Cover Letter by Length:
Cost Analysis 2

Cover Letter		Questionnaire Length			
		1 page 20 items	1 page 40 items	3 pages 20 items	3 pages 40 items
Cover Letter	typed professional	44.8 69.2¢	45.8 67.6¢	43.7 80.2¢	60.4 58.1¢
	typed personal	43.7 70.8¢	51.0 60.7¢	49.0 71.7¢	54.2 64.8¢
	form professional	39.6 8.1¢	53.1 6.0¢	43.7 16.7¢	37.5 19.5¢
	form personal	55.2 5.8¢	43.7 7.3¢	49.0 14.9¢	51.0 14.3¢

Low-threat
Questionnaire
(Role of Higher Education)

Cover Letter		Questionnaire Length			
		1 page 20 items	1 page 40 items	3 pages 20 items	3 pages 40 items
Cover Letter	typed professional	46.9 66.1¢	41.7 74.4¢	46.9 74.9¢	44.8 78.4¢
	typed personal	44.8 69.2¢	54.2 57.2¢	41.7 84.2¢	58.3 60.2¢
	form professional	52.1 6.1¢	35.4 9.0¢	43.7 16.7¢	50.0 14.6¢
	form personal	42.7 7.5¢	57.3 5.6¢	36.5 20.0¢	42.7 17.1¢

Moderate-threat
Questionnaire
(Governance of Higher Education)

Cover Letter		Questionnaire Length			
		1 page 20 items	1 page 40 items	3 pages 20 items	3 pages 40 items
Cover Letter	typed professional	49.0 63.3¢	35.4 87.5¢	41.7 84.2¢	45.8 76.6¢
	typed personal	57.3 54.1¢	44.8 69.2¢	46.9 74.9¢	47.9 73.3¢
	form professional	38.5 8.3¢	40.6 7.9¢	45.8 15.9¢	42.7 17.1¢
	form personal	40.6 7.9¢	47.9 6.7¢	41.7 17.5¢	46.9 15.6¢

High-threat
Questionnaire
(Control of Higher Education)

TABLE 9

Costs Associated with Interaction of
Questionnaire Length by Stamp by Anonymity:
Cost Analysis 2

		Questionnaire Length			
		1 page 20 items	1 page 40 items	3 pages 20 items	3 pages 40 items
Return Envelope	Stamp	49.3	51.7	50.7	45.8
		21.7¢	20.7¢	29.2¢	32.3¢
	No Stamp	51.0	41.0	40.3	48.3
		5.3¢	6.6¢	16.9¢	14.1¢

Anonymous

		Questionnaire Length			
		1 page 20 items	1 page 40 items	3 pages 20 items	3 pages 40 items
Return Envelope	Stamp	45.1	43.4	40.6	51.0
		23.7¢	24.6¢	36.4¢	29.0¢
	No Stamp	39.6	47.6	45.1	49.0
		6.8¢	5.7¢	15.1¢	13.9¢

Nonanonymous

The same problem which confronted the investigators when trying to interpret the graphs of these interactions was present when trying to understand why certain combinations of variables resulted in lower costs per returns than would have been expected had there been no interaction. Again, the reader is left to ponder plausible causes for these results.

Summary of Cost Analysis 2. The Analysis 2 cost data for each of the cost-laden main effects and both significant interactions are presented in Table 10.

TABLE 10

Cost Analysis for Analysis 2

Variable	N Mailed	Initial Cost	Cost per Mailing	% Return	Cost per Return
1. length					
a. 1 page	2304	$ 50.69	2.2¢	46.1	3.8¢
b. 3 pages	2304	$145.15	6.3¢	46.3	13.6¢
2. cover letter					
a. typed	2304	$663.55	28.8¢	47.5	60.7¢
b. form	2304	$ 23.04	1.0¢	44.9	2.2¢
3. return envelope					
a. with stamp	2304	$195.84	8.5¢	47.2	18.0¢
b. without stamp	2304	$ 11.52	.5¢	45.2	1.1¢
4. follow-up					
a. none	1536	-	-	43.4	
b. postcard	946	$ 92.71	9.8¢	44.9	90.0¢[a]
c. letter and questionnaire	961	$165.29	17.2¢	50.0	82.6¢[a]
5. questionnaire threat x cover letter x length					
a. low threat ("role" questionnaire), 1 page 20 items, typed professional appeal	96	$ 29.76	31.0¢	44.8	69.2¢
b. low threat, 1 page 40 items, typed professional appeal	96	$ 29.76	31.0¢	45.8	67.6¢
c. low threat, 1 page 20 items, typed personal appeal	96	$ 29.76	31.0¢	43.7	70.8¢
d. low threat, 1 page 40 items, typed personal appeal	96	$ 29.76	31.0¢	51.0	60.7¢

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[a] These costs are based on the number of returns which arrived _after_ the first analysis had been performed.

TABLE 10

Cost Analysis for Analysis 2

Variable	N Mailed	Initial Cost	Cost per Mailing	% Return	Cost per Return
e. low threat, 3 pages 20 items, typed professional appeal	96	$ 33.70	35.1¢	43.7	80.2¢
f. low threat, 3 pages 40 items, typed professional appeal	96	$ 33.70	35.1¢	60.4	58.1¢
g. low threat, 3 pages 20 items, typed personal appeal	96	$ 33.70	35.1¢	49.0	71.7¢
h. low threat, 3 pages 40 items, typed personal appeal	96	$ 33.70	35.1¢	54.2	64.8¢
i. low threat, 1 page 20 items, form professional appeal	96	$ 3.07	3.2¢	39.6	8.1¢
j. low threat, 1 page 40 items, form professional appeal	96	$ 3.07	3.2¢	53.1	6.0¢
k. low threat, 1 page 20 items, form personal appeal	96	$ 3.07	3.2¢	55.2	5.8¢
l. low threat, 1 page 40 items, form personal appeal	96	$ 3.07	3.2¢	43.7	7.3¢
m. low threat, 3 pages 20 items, form professional appeal	96	$ 7.01	7.3¢	43.7	16.7¢
n. low threat, 3 pages 40 items, form professional appeal	96	$ 7.01	7.3¢	37.5	19.5¢
o. low threat, 3 pages 20 items, form personal appeal	96	$ 7.01	7.3¢	49.0	14.9¢
p. low threat, 3 pages 40 items, form personal appeal	96	$ 7.01	7.3¢	51.0	14.3¢

TABLE 10

Cost Analysis for Analysis 2

Variable	N Mailed	Initial Cost	Cost per Mailing	% Return	Cost per Return
aa. same as 5a above but moderate threat ("governance" questionnaire)	96	$ 29.76	31.0¢	46.9	66.1¢
bb. same as 5b - moderate threat	96	$ 29.76	31.0¢	41.7	74.4¢
cc. same as 5c - moderate threat	96	$ 29.76	31.0¢	44.8	69.2¢
dd. same as 5d - moderate threat	96	$ 29.76	31.0¢	54.2	52.2¢
ee. same as 5e - moderate threat	96	$ 33.70	35.1¢	46.9	74.9¢
ff. same as 5f - moderate threat	96	$ 33.70	35.1¢	44.8	78.4¢
gg. same as 5g - moderate threat	96	$ 33.70	35.1¢	41.7	84.2¢
hh. same as 5h - moderate threat	96	$ 33.70	35.1¢	58.3	60.2¢
ii. same as 5i - moderate threat	96	$ 3.07	3.2¢	52.1	6.1¢
jj. same as 5j - moderate threat	96	$ 3.07	3.2¢	35.4	9.0¢
kk. same as 5k - moderate threat	96	$ 3.07	3.2¢	42.7	7.5¢
ll. same as 5l - moderate threat	96	$ 3.07	3.2¢	57.3	5.6¢
mm. same as 5m - moderate threat	96	$ 7.01	7.3¢	43.7	16.7¢
nn. same as 5n - moderate threat	96	$ 7.01	7.3¢	50.0	14.6¢
oo. same as 5o - moderate threat	96	$ 7.01	7.3¢	36.5	20.0¢
pp. same as 5p - moderate threat	96	$ 7.01	7.3¢	42.7	17.1¢

TABLE 10

Cost Analysis for Analysis 2

Variable	N Mailed	Initial Cost	Cost per Mailing	% Return	Cost per Return
aaa. same as 5a above but high threat ("control" questionnaire)	96	$ 29.76	31.0¢	49.0	63.3¢
bbb. same as 5b - high threat	96	$ 29.76	31.0¢	35.4	87.5¢
ccc. same as 5c - high threat	96	$ 29.76	31.0¢	57.3	54.1¢
ddd. same as 5d - high threat	96	$ 29.76	31.0¢	44.8	69.2¢
eee. same as 5e - high threat	96	$ 33.70	35.1¢	41.7	84.2¢
fff. same as 5f - high threat	96	$ 33.70	35.1¢	45.8	76.6¢
ggg. same as 5g - high threat	96	$ 33.70	35.1¢	46.9	74.9¢
hhh. same as 5h - high threat	96	$ 33.70	35.1¢	47.9	73.3¢
iii. same as 5i - high threat	96	$ 3.07	3.2¢	38.5	8.3¢
jjj. same as 5j - high threat	96	$ 3.07	3.2¢	40.6	7.9¢
kkk. same as 5k - high threat	96	$ 3.07	3.2¢	40.6	7.9¢
lll. same as 5l - high threat	96	$ 3.07	3.2¢	47.9	6.7¢
mmm. same as 5m - high threat	96	$ 7.01	7.3¢	45.8	15.9¢
nnn. same as 5n - high threat	96	$ 7.01	7.3¢	42.7	17.1¢
ooo. same as 5o - high threat	96	$ 7.01	7.3¢	41.7	17.5¢
ppp. same as 5p - high threat	96	$ 7.01	7.3¢	46.9	15.6¢

TABLE 10

Cost Analysis for Analysis 2

Variable	N Mailed	Initial Cost	Cost per Mailing	% Return	Cost per Return
6. length x stamp x anonymity					
a. anonymous, 1 page 20 items, stamp	288	$ 30.82	10.7¢	49.3	21.7¢
b. anonymous, 1 page 40 items, stamp	288	$ 30.82	10.7¢	51.7	20.7¢
c. anonymous, 3 pages 20 items, stamp	288	$ 42.62	14.8¢	50.7	29.2¢
d. anonymous, 3 pages 40 items, stamp	288	$ 42.62	14.8¢	45.8	32.3¢
e. anonymous, 1 page 20 items, no stamp	288	$ 7.78	2.7¢	51.0	5.3¢
f. anonymous, 1 page 40 items, no stamp	288	$ 7.78	2.7¢	41.0	6.6¢
g. anonymous, 3 pages 20 items, no stamp	288	$ 19.58	6.8¢	40.3	16.9¢
h. anonymous, 3 pages 40 items, no stamp	288	$ 19.58	6.8¢	48.3	14.1¢
aa. same as 6a above, but nonanonymous	288	$ 30.82	10.7¢	45.1	23.7¢
bb same as 6b - nonanonymous	288	$ 30.82	10.7¢	43.4	24.6¢
cc. same as 6c - nonanonymous	288	$ 42.62	14.8¢	40.6	36.4¢
dd. same as 6d - nonanonymous	288	$ 42.62	14.8¢	51.0	29.0¢
ee. same as 6e - nonanonymous	288	$ 7.78	2.7¢	39.6	6.8¢
ff. same as 6f - nonanonymous	288	$ 7.78	2.7¢	47.6	5.7¢
gg. same as 6g - nonanonymous	288	$ 19.58	6.8¢	45.1	15.1¢
hh. same as 6h - nonanonymous	288	$ 19.58	6.8¢	49.0	13.9¢

NOTE - These cost figures are applicable only for mailings in the quantities indicated. Anonymity, questionnaire content, and outgoing envelope are not included here since their levels did not differ in cost.

Cost Analysis for Analysis 3

All table entries except cumulative percent returns and cost per returns in this analysis were the same as in the past analyses. Since it would be impossible for a person to receive a second follow-up without previously receiving a first follow-up, calculation of the final follow-up costs were computed on the basis of the costs for the first and second follow-up contacts combined. Costs per returns were then calculated by dividing the number of returns which were received after the initial mailing into the costs for the two follow-ups combined.

Significant Interactions. There was only one significant interaction in this analysis: length by stamp by anonymity. Percent returns and cost per return for this interaction are given in Table 11. Again, the cover letter factor is missing. By the time of this analysis, however, there were no significant differences in response rate for the typed and form cover letters. Therefore, the form letter would be recommended for use if two follow-ups are included in the survey design.

TABLE 11

Costs Associated with Interaction of
Questionnaire Length by Stamp by Anonymity:
Cost Analysis 3

		Questionnaire Length				Questionnaire Length			
		1 page 20 items	1 page 40 items	3 pages 20 items	3 pages 40 items	1 page 20 items	1 page 40 items	3 pages 20 items	3 pages 40 items
Return Envelope	Stamp	53.1	53.5	54.2	47.2	47.6	47.6	43.1	53.8
		20.1¢	20.0¢	27.3¢	31.3¢	22.5¢	22.5¢	34.4¢	27.5¢
	No Stamp	54.9	43.1	43.1	50.7	43.1	50.7	48.6	51.7
		4.9¢	6.3¢	15.8¢	13.4¢	6.3¢	5.3¢	14.0¢	13.1¢
		Anonymous				Nonanonymous			

Summary of Cost Analysis 3. Cost data are provided in Table 12 for each of the cost-laden main effects and for the one significant interaction at the time of the final cut-off date for Analysis 3.

TABLE 12

Cost Analysis for Analysis 3

Variable	N Mailed	Initial Cost	Cost per Mailing	% Return	Cost per Return
1. length					
a. 1 page	2304	$ 50.69	2.2¢	49.2	4.5¢
b. 3 pages	2304	$145.15	6.3¢	49.0	12.9¢
2. cover letter					
a. typed	2304	$663.55	28.8¢	50.5	57.0¢
b. form	2304	$ 23.04	1.0¢	47.7	2.1¢
3. return envelope					
a. stamped	2304	$195.84	8.5¢	50.0	17.0¢
b. not stamped	2304	$ 11.52	.5¢	48.2	1.0¢
4. follow-up					
a. none	1536	-	-	44.2	--
b. postcard and postcard	900	$158.40	17.6¢	47.9	$1.063[a]
c. letter and postcard	881	$237.87	27.0¢	55.2	84.9¢[a]
5. length x stamp x anonymity					
a. anonymous, 1 page 20 items, stamp	288	$ 30.82	10.7¢	53.1	20.1¢
b. anonymous, 1 page 40 items, stamp	288	$ 30.82	10.7¢	53.5	20.0¢
c. anonymous, 3 pages 20 items, stamp	288	$ 42.62	14.8¢	54.2	27.3¢
d. anonymous, 3 pages 40 items, stamp	288	$ 42.62	14.8¢	47.2	31.3¢
e. anonymous, 1 page 20 items, no stamp	288	$ 7.78	2.7¢	54.9	4.9¢
f. anonymous, 1 page 40 items, no stamp	288	$ 7.78	2.7¢	43.1	6.3¢

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[a] These costs are based on the number of returns which arrived after the first analysis had been performed.

TABLE 12

Cost Analysis for Analysis 3

Variable	N Mailed	Initial Cost	Cost per Mailing	% Return	Cost per Return
g. anonymous, 3 pages 20 items, no stamp	288	$ 19.58	6.8¢	43.1	15.8¢
h. anonymous, 3 pages 40 items, no stamp	288	$ 19.58	6.8¢	50.7	13.4¢
aa. same as 5a above but nonanonymous	288	$ 30.82	10.7¢	47.6	22.5¢
bb. same as 5b - nonanonymous	288	$ 30.82	10.7¢	47.6	22.5¢
cc. same as 5c - nonanonymous	288	$ 42.62	14.8¢	43.1	34.4¢
dd. same as 5d - nonanonymous	288	$ 42.62	14.8¢	53.8	27.5¢
ee. same as 5e - nonanonymous	288	$ 7.78	2.7¢	43.1	6.3¢
ff. same as 5f - nonanonymous	288	$ 7.78	2.7¢	50.7	5.3¢
gg. same as 5g - nonanonymous	288	$ 19.58	6.8¢	48.6	14.0¢
hh. same as 5h - nonanonymous	288	$ 19.58	6.8¢	51.7	13.1¢

Results as Related to Study Questions

The results found in the three analyses are discussed below as they relate to each of the questions which were posed for this study in Chapter 1.

1. Which single techniques for increasing response rates are most effective?
   a. Is there a significant increase in response rates when the questionnaire is limited to one page?

No. Orthogonal contrasts in the three analyses showed that the one-page questionnaires were no more effective in eliciting higher response rates than the three-page questionnaires.[4]

b. Is there a significant increase in response rates when the questionnaire has fewer (e.g., 20) items?

Only in Analysis 1 did the orthogonal contrasts show that fewer items contributed to a higher response rate. By Analyses 2 and 3, all significant differences in the response rates between the 20 and 40 item instruments were eliminated.

c. Is there a significant increase in response rates when the cover letter is typed?

Yes, although it seems to be "washed out" by repeated form letter follow-ups. After Analysis 1, when respondents had received only a personally typed letter or a form letter, the typed letter did elicit a significantly higher response rate. After Analysis 2, when some of the respondents had received one form follow-up in addition to the typed or form original cover letter, those persons who had received a typed cover letter still responded significantly more often. By the time of Analysis 3, when some persons had received two form follow-ups in addition to the cover letter, there were no differences in the response rates for the groups who had initially received typed or form cover letters. Future studies might profitably study the effect (and feasibility) of maintaining personalization through all follow-up procedures.

d. Is there a significant difference in response rates depending on whether the appeal of the cover letter is professional or personal?

There is definitely a significant increase in response rates when the appeal of the cover letter is a personal one. Orthogonal contrasts showed this to be true during the first two analyses, which were the two times when the professional-personal dichotomy was maintained. The professional-personal dichotomy was not maintained in the second follow-up; the identical request was sent to both groups. It is therefore not surprising that there were no significant differences found in Analysis 3 between response rates for the groups which initially received the differential professional and personal appeals.

e. Is there a significant increase in response rates when a stamped return envelope is enclosed?

No. None of the three analyses showed this to be the case. Readers should be cautioned not to overgeneralize these results, however, since the investigators believe that many of the respondents in this study had access to free mailing privileges through their colleges and universities.

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[4] The reader is reminded that this question pertains only to response rates for questionnaire length as a main effect, not in interaction with other variables.

f. Is there a significant increase in response rates when follow-up correspondence is in the form of a letter with another questionnaire enclosed?

Yes, it seems that response rates are definitely improved when another questionnaire is enclosed with the follow-up request. In both the second and third analyses, at which times the effects of the follow-ups should have been operating, the "letter and questionnaire" group responded significantly more often than either the "postcard follow-up" or "no follow-up" groups. It was interesting to note that by the time of Analysis 3, however, even a postcard follow-up produced a significantly higher response rate than did no follow-up at all.

g. Is there a significant increase in response rates when the anonymity of the respondent is assured?

No. There were no significant differences found on the anonymity variable in any of the three analyses. Neither were there any significant interactions between anonymity and level of perceived threat. It might have been hypothesized that as the perceived threat level increased, the importance of anonymity might also have increased. Since there were no significant interactions, however, that hypothesis seems untenable (although the different interest levels of the questionnaires, as will be discussed later, might have confounded these results).

2. Do these selected techniques (for maximum response rates) have differing effects depending on the perceived threat level of the questionnaire?

Not in general. In none of the three analyses was there a significant main effect for the perceived threat level of the questionnaire. In only one of the four significant interactions was questionnaire threat level involved. Threat interacted with length and cover letter as shown in Analysis 2 earlier in this chapter. However, these variables did not interact significantly in Analyses 1 and 3. Therefore, it can be concluded that the main effects studied herein do not have differing effects depending on the perceived threat levels of the questionnaire.

3. What is the relative cost of each of the selected techniques?

a. Questionnaire length. The one-page questionnaires cost about one-third less to produce than the three-page questionnaires. There was no significant difference between response rates for the one- and three-page instruments. Therefore, one could save money by limiting questionnaires to one page, assuming of course that requisite content could be compressed into one page.

b. Cover letter. Initial production costs were almost 30 times as great for the typed letter as for the form letter (the ratio was approximately 29:1). At the time of Analysis 1, the cost per returned questionnaire ratio was 27:1; at the time of Analysis 2, the ratio had increased to 27.5:1; and by Analysis 3, the ratio had returned to 27:1. Although considerably more expensive to produce, the typed cover letters improve response rates significantly, both singly and in combination with other variables. Apparently the initial impact of a typed letter remains through at least one duplicated follow-up, since significant differences between typed and form letters were still apparent in Analysis 2.

c. Stamp. Production costs were 17 times as great when a stamped rather than an unstamped return envelope was enclosed. Since there were no significant differences in response rates for these two groups, the 17:1 ratio, in effect, was maintained in the cost per returned questionnaire. For this group of respondents, the inclusion of a stamped return envelope did not significantly increase response rates. Therefore, if other researchers are planning to conduct questionnaire surveys with the same type of respondents (persons who might have free mailing privileges through their employer), a substantial savings would result by including an unstamped return envelope.

d. Follow-up. No additional cost was associated with this variable for the group which received no follow-up. The ratio of the production costs at the time of the first follow-up for follow-up postcard and letter (with questionnaire enclosed) was 1:1.75. However, the ratio of costs per returned questionnaire for postcard and letter was 1:.92, due to the effectiveness of the letter follow-up. After the second follow-up, total production costs were 17.6¢ for the postcard first follow-up and postcard second follow-up combination and 27.0¢ for the letter first follow-up and postcard second follow-up combination -- a ratio of 1:1.5. However, the letter follow-up continued in effectiveness, resulting in a final ratio of costs per returned questionnaire of 1:.80. Although the least expensive of all methods would be to send no follow-up at all, the significantly smaller return shown by this group should prompt the researcher not to choose this method unless any follow-up is simply out of the question financially. A postcard follow-up, although less expensive in initial costs than sending a letter with another questionnaire enclosed, does not seem to make a very appreciable difference in the number of returns until nonrespondents have received two reminders. The follow-up letter and enclosed questionnaire were more expensive to send initially, but the greater return rate prompted by them resulted in a cost per returned questionnaire which was actually less than the cost per returned questionnaire for the follow-up postcard. Therefore, in terms of cost per returned questionnaire, the most economical method of follow-up per return is the letter with another questionnaire enclosed.

4. Are there certain combinations of techniques which are more effective and economical in increasing response rates?

In Analysis 1, the most effective combination of techniques was a typed letter with a personal appeal and a stamped return envelope. That combination yielded a response rate of 46.2%. Unfortunately, this was also one of the most expensive combinations, with a cost per returned questionnaire of 80.8¢ (not counting the additional cost of the questionnaire and an outgoing envelope and stamp which must also be included to have a complete mailing). The most economical combination (form letter with personal appeal and unstamped return envelope) resulted in a return rate of 37.5% and cost 4.0¢ per returned questionnaire (again, not counting costs of questionnaire and outgoing envelope and stamp). In some studies, an increase of 8.7% in response rates may not justify the added expenditure of 76.8¢ per return. Conversely, in other studies, it may be well worth the additional money to insure greater representativeness of the sample. In the final analysis, only the investigator can answer this question, and the answer depends largely on his ability to conduct an adequate nonrespondent bias check.

In Analysis 2 (on returns from the initial mailing and one follow-up), a response rate of 60.4% was achieved by the combination of a low-threat, three-page, forty-item questionnaire and a typed letter with a professional appeal. The cost per returned questionnaire for that combination was 58.1¢ (not counting the cost of a return envelope and an outgoing envelope and stamp). However, a 57.3% response rate occurred for a cost per returned questionnaire of only 5.6¢ (again, without the cost of the return and outgoing envelopes) when a moderate-threat, one-page, forty-item questionnaire was accompanied by a form letter with a personal appeal. It would be, therefore, much more economical to use the latter combination, and response rate would be very little sacrificed.

In Analysis 3 (returns from initial mailing and two follow-ups), the combination with the highest response rate (54.9%) also had the least expensive cost per returned questionnaire (4.9¢, not counting the cost of the questionnaire and the outgoing envelope and stamp). That combination was a one-page, twenty-item questionnaire where anonymity was assured and an unstamped return envelope was enclosed.

To present some of these data in tabular form, the following three lists are presented to show the five combinations of variables with the highest response rates and the five combinations of variables with the lowest cost per returned questionnaire for each of the three analyses.

Analysis 1

Highest Response Rates

		% Return	Cost per Return
1.	typed cover letter, personal appeal, stamped return envelope	46.2%	(80.8¢)
2.	typed cover letter, professional appeal, unstamped return envelope	38.4%	(76.4¢)
3.	form cover letter, personal appeal, unstamped return envelope	37.5%	(4.0¢)
4.	form cover letter, personal appeal, stamped return envelope	37.3%	(25.4¢)
5.	typed cover letter, personal appeal, unstamped return envelope	36.6%	(80.0¢)
	form cover letter, professional appeal, unstamped return envelope	36.6%	(4.1¢)

Lowest Cost per Returned Questionnaire

		Cost per Return	% Return
1.	form cover letter, personal appeal, unstamped return envelope	4.0¢	(37.5%)
2.	form cover letter, professional appeal, unstamped return envelope	4.1¢	(36.6%)
3.	form cover letter, personal appeal, stamped return envelope	25.4¢	(37.3%)
4.	form cover letter, professional appeal, stamped return envelope	27.4¢	(34.7%)
5.	typed cover letter, professional appeal, unstamped return envelope	76.4¢	(38.4%)

Analysis 2

Highest Response Rates	% Return	Cost per Return
1. low threat, 3-page 40-item questionnaire, typed cover letter, professional appeal	60.4%	(58.1¢)
2. moderate threat, 3-page 40-item questionnaire, typed cover letter, personal appeal	58.3%	(60.2¢)
3. moderate threat, 1-page 20-item questionnaire, form cover letter, personal appeal	57.3%	(5.6¢)
high threat, 1-page 20-item questionnaire, typed cover letter, personal appeal	57.3%	(54.1¢)
4. low threat, 1-page 20-item questionnaire, form cover letter, personal appeal	55.2%	(5.8¢)
5. low threat, 3-pages 40-item questionnaire, typed cover letter, personal appeal	54.2%	(64.8¢)
moderate threat, 1-page 40-item questionnaire, typed cover letter, personal appeal	54.2%	(57.2¢)

Lowest Cost per Returned Questionnaire	Cost per Return	% Return
1. 1-page 20-item questionnaire, stamped return envelope, anonymous	5.3¢	(51.0%)
2. moderate threat, 1-page 40-item questionnaire, form cover letter, personal appeal	5.6¢	(57.3%)
3. 1-page 40-item questionnaire, unstamped return envelope, nonanonymous	5.7¢	(47.6%)
4. low threat, 1-page 20-item questionnaire, form cover letter, personal appeal	5.8¢	(55.2%)
5. low threat, 1-page 40-item questionnaire, form cover letter professional appeal	6.0¢	(53.1%)

Analysis 3

Highest Response Rates

	% Return	Cost per Return
1. 1-page 20-item questionnaire unstamped return envelope, anonymous	54.9%	(4.9¢)
2. 3-page 20-item questionnaire stamped return envelope, anonymous	54.2%	(27.3¢)
3. 3-page 40-item questionnaire, stamped return envelope, nonanonymous	53.8%	(27.5¢)
4. 1-page 40-item questionnaire, stamped return envelope, anonymous	53.5%	(20.0¢)
5. 1-page 20-item questionnaire, stamped return envelope, anonymous	53.1%	(20.1¢)

Lowest Cost Per Returned Questionnaire

	Cost per Return	% Return
1. 1-page 20-item questionnaire, unstamped return envelope, anonymous	4.9¢	(54.9%)
2. 1-page 40-item questionnaire, unstamped return envelope, nonanonymous	5.3¢	(50.7%)
3. 1-page 40-item questionnaire, unstamped return envelope, anonymous	6.3¢	(43.1%)
1-page 20-item questionnaire, unstamped return envelope, nonanonymous	6.3¢	(43.1%)
4. 3-page 40-item questionnaire, unstamped return envelope, nonanonymous	13.1¢	(51.7%)
5. 3-page 40-item questionnaire, unstamped return envelope, anonymous	13.4¢	(50.7%)

Recommendations resulting from these data are presented in the next chapter in this report. Readers are reminded that complete tables of response rates for all 576 cells for each of the three analyses are reproduced in Appendix E.

CHAPTER 5

SUMMARY AND CONCLUSIONS

In this chapter, those aspects of the previous chapters essential to an understanding of this study are summarized briefly. In addition, conclusions and implications drawn from the results of this investigation are included.

Restatement of the Problem

The mailed questionnaire has many definite advantages as a data-gathering technique. However, even though it is one of the most widely used research tools in education, it usually suffers as a research technique from failure to obtain a sufficient proportion of returns so that valid conclusions may be drawn from the analysis of returned questionnaires. Some educational researchers spend a great deal of money and time on techniques which they assume will improve return rates. Unfortunately, there is no conclusive evidence that any of the techniques employed are effective; the persistent low rate of returns in educational research surveys suggests strongly that current attempts to increase return rates may be accomplishing little or nothing.

Researchers may try to motivate respondents to return questionnaires by appealing to any of a number of psychological sets which might prompt persons to cooperate in a questionnaire survey. Such sets or motives might include: (a) the respondent's scientific interest, (b) the respondent's sense of responsibility or professionalism, (c) the respondent's perception that he or his response is important, (d) the respondent's willingness to respond to the researcher's request for help, (e) the respondent's sense of security in responding, (f) the respondent's financial motives, (g) the respondent's guilt feelings, and (h) the respondent's perception that his task is a simple one. Previous research on techniques which relate to these motives and which are thought to help increase response rates has not yielded conclusive or particularly useful results. A systematic investigation of techniques for improving response rates to generate badly needed knowledge in this area was the purpose of this study. Specifically, the purpose of this research was to investigate in an experimental study several techniques[1] commonly used to increase response rates in mailed questionnaire surveys to determine their relative effectiveness, singly and in combination, in increasing the response rates of three mailed questionnaires which differed in their degree of perceived threat to respondents.

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[1] The techniques (or variables) included in this study were (a) perceived threat level of questionnaire content, (b) length and format of questionnaire, (c) content and form of reproduction of cover letter, (d) stamp on return envelope, (e) follow-up, and (f) anonymity.

Restatement of Objectives and Questions to be Answered by the Study

The major objective of this research was to determine which techniques of those selected for study were most effective in increasing response rates to three mailed questionnaires. In order to attain this objective, several sub-objectives had to be reached. Those sub-objectives were:

1. To determine the costs of selected techniques for increasing response rates to mailed questionnaires, both in time and money.
2. To determine which single techniques for increasing response rates to mailed questionnaires were most effective.
3. To determine which combinations of selected techniques for increasing response rates to mailed questionnaires were most effective.

These objectives were related to several questions. The questions to be answered by the present study are listed below.

1. Which single techniques for increasing response rates were most effective?
    a. Was there a significant increase in response rates when the questionnaire was limited to one page?
    b. Was there a significant increase in response rates when the questionnaire had fewer (e.g., 20) items?
    c. Was there a significant increase in response rates when the cover letter was typed?
    d. Was there a significant difference in response rates depending on whether the appeal of the cover letter was professional or personal?
    e. Was there a significant increase in response rates when a stamped return envelope was enclosed?
    f. Was there a significant increase in response rates when follow-up correspondence was in the form of a letter with another questionnaire enclosed?
    g. Was there a significant increase in response rates when the anonymity of the respondent was assured?

2. Did these selected techniques have differing effects depending on the perceived threat level of the questionnaire?

3. What was the relative cost of each of the selected techniques?

4. Were there certain combinations of techniques which were more effective and economical in increasing response rates?

Methods and Procedures

The methods and procedures used to collect and analyze data necessary to answer the questions are summarized briefly below.

The Population

To answer the questions posed in the study, it was necessary to define a population of persons to whom questionnaires were likely to be sent in the course of educational research. For a variety of reasons, all faculty members at four year colleges and universities in the United States were chosen as the population of interest. The names of such persons were listed in a publication entitled the *National Faculty Directory*. A more detailed discussion of the population appears earlier in this report (pp. 46-47).

The Sample

The research design required that a total of 4,608 persons receive questionnaires. Three names were chosen randomly from every page of the *National Faculty Directory*. This resulted in 5,067 names being drawn. From the 5,067, names were drawn randomly eight at a time to fill the 576 cells in the experimental design.

The Experimental Design

In order to answer the questions posed in the study, it was necessary to investigate the effects of the six selected variables singly and in combination. A research design was necessary which allowed the testing of main effects and interactions. Therefore, the design adopted for this study employed all combinations of all six variables; it was a completely crossed design with 576 cells in the design. Thus, it was possible to analyze the individual effects of the six variables as well as to analyze the effects of all possible combinations of the six variables.

The Questionnaires

Three different questionnaires were developed for use in this study. Each questionnaire was sent to a random third of the sample. The questionnaires differed in the level of the perceived threat implicit in the content of the questionnaire. This difference was supported by a validity check which showed that each questionnaire differed significantly in perceived threat ($p < .005$) from the other two. A complete description of the questionnaire development techniques appears earlier in this report (pp. 47-49), as well as a detailed assessment of the technical adequacy of the instruments (pp. 51-53). Copies of the three questionnaires appear in Appendix A.

Data Collection

Cover letters, questionnaires, outgoing and return envelopes were collated so that the appropriate combinations of the six variables were mailed to all respondents in the 576 cells. For example, one respondent might have received the "role of higher education" questionnaire (low perceived threat) which was one page in length and had twenty items, a stamped return envelope, a typed cover letter which used the personal appeal and assured the respondent anonymity; and if he failed to respond after the initial mailing, he received a follow-up postcard.

The initial distribution was made by first class mail on April 4, 1972. Approximately five weeks later, on May 10-12, 1972, follow-up correspondence was sent to nonrespondents in that portion of the research design where nonrespondents were intended to receive follow-up letters or postcards. Approximately five weeks after the first follow-up was sent, on June 16, 1972, a postcard reminder was sent to those persons who had received the first follow-up but who still had not responded.

It was necessary that 4,608 persons receive a questionnaire, not just that 4,608 questionnaires be mailed. Therefore, when 360 questionnaires were returned as undeliverable after the initial mailing, they were sent to 360 new persons who had been designated as part of a replacement sample. It became evident, however, that it could be a never-ending process to try to keep replacing those persons whose questionnaires had been returned as undeliverable. Another problem arose when 203 follow-ups were returned as undeliverable, thus causing doubt as to whether the questionnaires in the initial mailing for those 203 persons had been delivered. Therefore, a probability technique was employed to estimate the likelihood of a person returning the questionnaire if he had received it. An illustration of the technique is given on page 54. This technique in effect negated problems with the final set of undeliverables, enabling the probability of their having returned the questionnaire to be estimated in a way that neither systematically inflated nor deflated percentages of returns in cells.

At the time of the cut-off date (August 25, 1972), approximately 49% of the questionnaires had been returned.

Processing of Responses

As the returns were received, they were checked off on a master list. Before the first analysis, all 4,608 names in the sample were coded by identification number, descriptors of the cell in which the persons were placed, and whether they had returned a questionnaire or not. The data were transferred from the coding forms to computer cards by keypunchers at the University of Colorado Computing Center. For subsequent analyses (a total of three analyses were performed), the only necessity was to pull those computer cards of persons who had returned a questionnaire subsequent to the prior analysis. Those cards were repunched to show that a completed questionnaire had been returned and then reinserted in the data deck.

Statistical Treatment of the Data

The data were analyzed on three separate occasions: once before the first follow-up correspondence was sent, again before the second follow-up correspondence was sent, and finally after a pre-established cut-off date. The three analyses were performed to provide guidance to researchers who varied in the time or money available to them for use in follow-up contacts with respondents.

Both descriptive and inferential statistics were used in the analyses. Percentages, analysis of variance, Newman-Keuls tests of multiple comparisons, and planned orthogonal contrasts were the statistical techniques used in the study.

Cost Analyses

For each of the variables which involved expenditures of time or money, cost analyses were performed corresponding to the three analyses described above. These cost analyses allowed the investigators to determine the costs involved for each questionnaire mailed to respondents and for each completed questionnaire received by the investigators. Further explanation of how the cost figures were computed appears on page 60.

Results of the Study

This study was designed to focus on four major questions. These questions and their appropriate responses based on the data analysis are summarized briefly below. A detailed presentation of the findings is included in Chapter 4 of this report.

1. Which single techniques for increasing response rates were most effective?

    a. Was there a significant increase in response rates when the questionnaire was limited to one page?

    No. Orthogonal contrasts in the three analyses showed that the one page questionnaires were no more effective in eliciting higher response rates than the three page questionnaires.

b. Was there a significant increase in response rates when the questionnaire had fewer (e.g., 20) items?

Only in Analysis 1 did the orthogonal contrasts show that fewer items contributed to a higher response rate. By the time of Analyses 2 and 3, all significant differences in the response rates between the 20- and 40-item instruments were eliminated.

c. Was there a significant increase in response rates when the cover letter was typed?

In Analyses 1 and 2, the group of respondents receiving a personally typed cover letter returned questionnaires significantly more often. By the time of Analysis 3, there were no differences in the response rates for the groups who had received typed or form cover letters. It should be remembered that by this time, however, some persons had received two form follow-up reminders.

d. Was there a significant difference in response rates depending on whether the appeal of the cover letter was professional or personal?

In Analyses 1 and 2, the group receiving cover letters and follow-ups with a personal appeal returned questionnaires significantly more often. After Analysis 3, there were no differences in response rates for the two groups. (It should be noted, however, that the professional-personal dichotomy was not maintained in the second follow-up.)

e. Was there a significant increase in response rates when a stamped return envelope was enclosed?

Not with this group of respondents. However, the investigators believe that many respondents had access to free mailing privileges through their employing institutions and so readers should be cautioned not to overgeneralize these results.

f. Was there a significant increase in response rates when follow-up correspondence was in the form of a follow-up letter with another questionnaire enclosed?

Yes, response rates were definitely improved when another questionnaire was enclosed with the follow-up request. By Analysis 3, however, even the group which had received only postcard follow-ups had a significantly higher response rate than did the group which had received no follow-up at all.

g. Was there a significant increase in response rates when the anonymity of the respondent was assured?

No, there were no significant differences found on the anonymity variable in any of the three analyses.

2. Did the selected techniques (for increasing response rates) have differing effects depending on the perceived threat level of the questionnaire?

   Not in general. In none of the three analyses was there a significant main effect for perceived threat of the questionnaire. Similarly, in three of the four significant interactions, perceived threat was not a factor. Therefore, the investigators concluded that, in general, the other main effects studied do not have differing effects depending on the perceived threat levels of the questionnaires. However, because all three questionnaires were not equal in their level of interest, it was not possible to answer this question definitively.

3. What were the relative costs of each of the selected techniques?

   a. Questionnaire length. The one-page questionnaires cost about one-third less to produce than the three-page questionnaires. Since there were no significant differences in the response rates for the two lengths, the ratio of final costs per returned questionnaire for one- and three-page questionnaires was 1:3.

   b. Cover letter. Initial production costs were almost 30 times as great for the typed letter as for the form letter (the ratio was approximately 29:1). At the time of Analysis 1, the cost per returned questionnaire ratio was 27:1; at the time of Analysis 2, the ratio had increased to 27.5:1; and by Analysis 3, the ratio had returned to 27:1.

   c. Return envelope. Production costs were 17 times as great when a stamped rather than an unstamped return envelope was enclosed. Since there were no significant differences in response rates for these two groups, the 17:1 ratio, in effect, was maintained in the cost per returned questionnaire.

   d. Follow-up. No additional cost was associated with this variable for the group which received no follow-up. The ratio of the production costs at the time of the first follow-up for follow-up postcard and letter (with questionnaire enclosed) was 1:1.75. After Analysis 2 (the first time the follow-up had been used), the ratio of costs per returned questionnaire was 1:.92. At the time of the second follow-up (when nonrespondents had received a first follow-up and a second follow-up) production costs were 17.6¢ for the first follow-up (a postcard) and second follow-up (also a postcard) and 27.0¢ for the first follow-up (a letter and questionnaire) and second follow-up (postcard) -- a ratio of 1:1.5. After Analysis 3 (when both the first and second follow-ups had been in effect), the ratio of costs per returned questionnaire was 1:.80.

4. Were there certain combinations of techniques which were more effective and economical in increasing response rates?

   The reader is referred to tables in Chapter 4 for complete cost and percentage return figures for all of the significant interactions in the three analyses. To summarize them, in Analysis 1, there was no one combination of techniques which elicited both a high rate of return and a low cost per returned questionnaire. The highest response rate (46.2%) was achieved by a combination of techniques costing 80.8¢ per returned questionnaire, while the most economical combination (4.0¢ per returned questionnaire) elicited only a 37.5% response rate.

In analysis 2, a combination of techniques costing 5.6¢ per returned questionnaire achieved a response rate of 57.3%, only 3.1% less than the highest response rate, which cost 58.1¢ per returned questionnaire. The former, inexpensive combination consisted of a moderate threat, one-page forty-item questionnaire accompanied by a form letter using a personal appeal.

In Analysis 3, the combination with the highest response rate (54.9%) also had the least expensive cost per returned questionnaire (4.9¢). That combination was a one-page twenty-item questionnaire where anonymity was assured and an unstamped return envelope was enclosed.

None of the costs listed above are the actual amounts which it took to send a complete mailing. That is, in the combination of techniques noted in the paragraph above, the cost of the cover letter and the outgoing envelope are not included. The reader is referred to Chapter 4, pp. 76-77, 79, 87, for an explanation of these extra costs associated with a complete mailing.

Integration of Present Results with Prior Research

In this section, the results from the present investigation are discussed and, where possible, integrated with results of prior research, under the eight motives listed previously which might prompt respondents to complete and return questionnaires. The motives are presented in the same order as they appeared in Chapter 2, and the reader is referred to that chapter for a complete discussion of the results of prior research.

Respondent's Scientific Interest

If the "professional" cover letter used in this study did, in fact, appeal to the respondents' scientific interest, then the fact that this cover letter prompted fewer returns than did the "personal" cover letter provides evidence that an appeal to this particular motive is not effective in eliciting higher response rates. This result is consistent with results reported by Hammond (1959) and Linsky (1965), the only two studies identified as being relevant to this motive.

Respondent's Sense of Responsibility/Professionalism

The "professional" cover letter combined an appeal to this motive with the "respondent's scientific interest" motive. The remarks in the section above are appropriate here. No other research was identified in which a direct appeal to this motive had been made in the cover letter.

Respondent's Perception That He or His Response is Important

It was argued in Chapter 2 that the possibility exists that a respondent is more likely to return a questionnaire if he thinks the investigator is particularly interested in his response. Such things as a typed cover letter and an appeal in the cover letter to the respondent's importance are two of the ways an investigator might show this interest to the respondent. In the present study, both a typed cover letter and a personal appeal in the cover letter elicited significantly higher response rates. This would corroborate results reported by Moore (1941), Frazier and Bird (1958), and Linsky (1965), but run counter to results reported by Clausen and Ford (1947), Weilbacher and Walsh (1952), Longworth (1953), Venne (1954), Mooren and Rothney (1956), Scott (1961), Martin and McConnell (1970), and Kawash and Aleamoni (1971). Obviously, further research aimed specifically at investigation of these discrepancies would be useful.

Respondent's Willingness to Respond to Request for Help

The "personal" appeal in one of the cover letters combined this motive with the one above, and therefore the remarks immediately above are appropriate here as well; an appeal for help resulted in a significant improvement in response rate. However, these results are incongruent with the few previous studies which have been conducted on this motive (Sirken, Pifer, and Brown, 1960; Linsky, 1965; Champion and Sear, 1969). The anomalous results obtained in the present study would indicate that more research should be conducted in this area to determine just what operated in the present study to render the request for help so much more effective than in other studies which have attempted to use a similar appeal.

Respondent's Sense of Security in Responding

The results of this study agree with most previous research: the assurance of anonymity does not appreciably increase response rates in mailed questionnaire surveys.

Respondent's Financial Motive

Whereas previous research has shown the inclusion of monetary and other incentives with questionnaires to be effective techniques for increasing response rates, that variable was not included in the present study. It was hypothesized in Chapter 2 that enclosing a stamped return envelope might relate indirectly to this motive; that variable was included in the present study. The results obtained in this study -- i.e., no significant differences in response rate for stamped and unstamped return envelope -- are opposite to those found by Price (1950). In the other research reported in the section of Chapter 2 dealing with this motive (Robinson and Agisim, 1951; Ferriss, 1951; Hammond, 1959; Scott, 1961; Gullahorn and Gullahorn, 1963; Martin and McConnell, 1970), the return envelope factor was varied in a different way from the present study and, therefore, the studies are not directly comparable.

Respondent's Guilt Feelings

The highly significant increase in response rate for the group receiving a follow-up letter with another questionnaire enclosed is in keeping with the results reported by Miller and Engquist (1942), Bressler and Kephart (1956), and Scott (1961). The finding by Sletto (1940) that a postcard follow-up was just as effective as a letter follow-up was not replicated, but the variables were not manipulated in exactly the same way in the two studies. In the Sletto study, the follow-up letter did not contain another copy of the questionnaire, while in the present study it did. In the opinion of the investigators, it seems likely that the inclusion of the questionnaire (not the difference between letter and postcard) accounted for the significantly higher response rate associated with this group. Further research on this variable would be useful.

Respondent's Ease in Responding

The number of pages in the questionnaires used in this study did not have a significant effect on the response rates, but the number of items did (but only in the response to the initial mailing -- Analysis 1). The fewer the items in the instrument, the more often it was returned. These results agree with results reported by the National Education Association (1930), Sletto (1940), Sirken, Pifer, and Brown (1960), Newman (1962), and Scott (1961). The results of the present study are especially helpful in this category, since most of the statistics cited above fail to provide sufficient information about specific details of the studies.

Implications for Practice

The optimal situation which could be faced by a researcher undertaking a mailed questionnaire survey would be if neither time nor money were an important factor in his decision of how to proceed in his survey. Unfortunately, that situation is infrequent, if not non-existent. Therefore, recommendations are presented here which take into account the practical constraints under which many researchers operate.

It should also be noted as a preface to these recommendations that they apply equally to questionnaires of low, medium, and high threat unless otherwise specified.

If at all possible, a mailed questionnaire survey should be undertaken early enough so that time is allowed for sending follow-up reminders to nonrespondents. The problem of nonrespondent bias, as indicated earlier, is one which can be reduced or eliminated only by a high response rate. The impact of the follow-up in increasing response rates has been demonstrated in this and other studies. Indeed, it appears to be the most potent technique for increasing response rates. Therefore, the inclusion of follow-up mailings to nonrespondents in questionnaire surveys is the first, and most important, recommendation from the present study.

If time and money are not particular problems, the investigators would recommend the use of a typed cover letter employing a personal appeal (as defined in this study), an unstamped return envelope,[2] two follow-ups (at least one of which includes another copy of the questionnaire), and a questionnaire with the fewest number of items (e.g., 20) possible.

If money is a constraint, but time is not, the recommendation would be similar to the one made above: a cover letter employing a personal appeal, but a form letter rather than a typed one; an unstamped return envelope; two follow-ups (with another questionnaire enclosed in at least one of them); and a one-page questionnaire with the fewest number of items (e.g., 20) possible.

If time constraints dictate that only one follow-up may be sent, but financial support is sufficient, the investigators recommend: a typed cover letter with a personal appeal, an unstamped return envelope, a follow-up letter with another questionnaire enclosed, and whatever length questionnaire is needed (within the limits of three pages and 40 items which represent the maximum pages and items used in the present study).

When time and financial resources are both in short supply, the investigators would recommend the following. A time- and money-saving device would be to produce form cover letters rather than typed letters. Given two follow-ups, it appears that form cover letters are just as effective as typed letters. Other money-saving devices would be to enclose unstamped return envelopes and a one-page questionnaire. However, it is the opinion of the investigators that it may often be preferable to abandon a study rather than sacrifice representativeness of the sample. The inclusion of another copy of the questionnaire in the follow-up seems critical to the realization of a higher (and therefore more representative) response rate in most studies and is therefore strongly recommended if at all possible.

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[2] The reader is reminded of the possibility that the sample used in this study was unique in that many members doubtless had free mailing privileges through the college or university at which they were employed.

Limitations of This Study

The results of this study, like any study, are limited in their applicability and generalizability only to respondents like those employed here -- i.e., to four year college and university faculty members. Of course, many of the techniques used here may well be generalizable to similar groups (e.g., public-school teachers). However, as it stands now, the results should not be generalized to all samples in all mailed questionnaire surveys. The techniques used in this study should be tested with other types of persons to see if the same results obtain.

Another limitation of the present study is that "questionnaire threat," as used here, was actually "perceived threat." There was really no way to know how threatened respondents were by the content of the questionnaires. The only judgments which could be made were based on persons like the respondents saying how threatened they thought the respondents would be. Also, these results are generalizable only to the three levels of perceived threat which were present in this study. The three levels were not operationalized to allow for replication by other investigators. The present investigators can only suggest that other investigators perform pilot tests similar to the one described in the present study to get some idea of the perceived threat level of their questionnaire.

The fact that one of the questionnaires was not as interesting as the other two limits the interpretation which may be made on the effect of the perceived threat of the questionnaire. Also, it is clear that generalizations of these results are appropriate only with instruments like the ones used in this study -- that is, objective items in questionnaires of this length and of the interest and perceived threat levels associated with these instruments.

The fact that the National Faculty Directory used to select the sample was somewhat out of date was a limitation of the study. It is likely that the more mobile segment of the population of college and university faculty members was underrepresented in the population.

Implications for Further Research

The foremost implication, of course, would be to replicate this study with different samples: elementary and secondary school teachers, school administrators, junior and community college faculty members; or with specialized subgroups of the same population: creative scientists, new faculty members, etc. While the present investigators believe that many of the same results would be obtained, the possibility exists that differences might be noted in certain important variables (e.g., the stamped vs. unstamped return envelope).

It would be interesting to learn why the nonrespondents in this study failed to return questionnaires. Perhaps an appeal to a certain type of motive works best with a particular kind of person. Further research might focus on this question and perhaps increase the knowledge in this area to the point where a researcher planning a questionnaire survey with a certain group of respondents would know beforehand the kind of appeal which would most motivate the respondent.

If it would be possible to develop instruments which differed on perceived threat level, as the three questionnaires used in this study did, but were equal on interest level, some of the questions about the differential effect on response rate of certain variables could be answered more unequivocally than they were in the present study.

Several implications for further research are prompted by the conflicting results found in this study and previous research. For example, the results of this study and three others identified in Chapter 2 would indicate that increased personalization in the cover letter elicits a higher response to mailed questionnaire surveys, while the results of eight studies summarized in the same chapter report that increased personalization makes no difference. The personalization variable was not manipulated in the same way in all studies, and this may account for some of the conflicting results. More research should be undertaken, however, to try to determine the relative effects when personalization is varied in particular ways.

As pointed out earlier in this chapter, the results from the present study showing that a request for help made by the investigator was effective in increasing response rates are incongruent with results from other studies in which a similar appeal was made. Why this should be so is unclear at present, but certainly the area is one which would profit from further research.

The fact that the inclusion of a stamped return envelope did not significantly increase response rates was an important finding of this study, and it would be most useful to determine how generalizable this finding is to persons in other occupational groupings. Such information can only be gathered by further research on this variable.

Although the results of the effect of anonymity are congruent with other studies reported in Chapter 2, it should be remembered that several of those studies were concerned with questionnaires administered to an assembled group of persons. Therefore, other studies testing the effect of anonymity in mailed questionnaire surveys would be useful.

Conclusion

> "The 'disreputable' technique of obtaining data through the mails is apparently resolved to a long life, and since its retirement does not appear to be likely, perhaps the need for a program of rehabilitation is indicated [Waisanen, 1954, p. 210].

On the basis of the research reviewed here and the data resulting from the present study, Waisanen's request for a program of rehabilitation seems possible. Viewed from the perspective of the potential advantage of the mailed questionnaire in educational research, that rehabilitation is imperative. The results of this study are offered as one important step toward improving the use of mailed questionnaires as an important and valid method for collecting research and evaluation data.

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Appendix A

Questionnaires

A NATIONAL STUDY OF FACULTY VIEWS ON THE ROLE OF HIGHER EDUCATION

Please provide the following information: 1. ____________ Highest earned degree 2. ____________ Year of degree 3. ____________ Major

4. ____________ Degree-granting institution 5. ______ Sex 6. ____________ Present academic rank 7. ____________ If an administrator, title of present position

8. ______________________________
Present major area of teaching or professional identification
(use general categories--e.g., "psychology," not "social psychology")

9. ______________________________ 10. Do you hold tenure in your present institution? ______
Highest degree offered at your institution
in area you identified in item 8

DIRECTIONS: The summarized responses to this questionnaire may be used to present general information about the role of higher education. It will be indicated that this information results from a broad base of professional opinion. Therefore, please answer each question carefully and frankly, using the following definitions.

"INSTITUTION" refers to any university or 4-year college. "DEPARTMENT" refers to the smallest institutional unit (e.g., college, school, or division) with budgetary autonomy. "ADMINISTRATOR" refers to anyone who administers a department (as defined above) or any larger unit, including the entire institution. "EXTERNAL AGENCY" refers to a state legislature, a church governing board, or any other external agency to which an institution of higher education may be responsible, fiscally or otherwise.

11. Listed below are 40 areas of specialization which one could typically pursue as a major course of study in higher education (although not necessarily in any one institution). For each area of specialization, please rate the degree to which you think each subject area is relevant to one of the commonly held goals of higher education--that of preparing or enabling people to function effectively and happily in contemporary society.

DEGREE OF RELEVANCE
OF SUBJECT AREA

(Circle ONE numeral)

	SUBJECT AREA	Not at all relevant				Extremely relevant
11.1	Agriculture/Agronomy	1	2	3	4	5
11.2	Anthropology	1	2	3	4	5
11.3	Architecture	1	2	3	4	5
11.4	Art	1	2	3	4	5
11.5	Audiology/Speech Pathology	1	2	3	4	5
11.6	Biochemistry	1	2	3	4	5
11.7	Biology	1	2	3	4	5
11.8	Botany	1	2	3	4	5
11.9	Business Administration	1	2	3	4	5
11.10	Chemistry	1	2	3	4	5
11.11	Classical Languages	1	2	3	4	5
11.12	Economics	1	2	3	4	5
11.13	Education	1	2	3	4	5
11.14	Engineering	1	2	3	4	5
11.15	English	1	2	3	4	5
11.16	Environmental Studies	1	2	3	4	5
11.17	Forestry/Wildlife Mgmt.	1	2	3	4	5
11.18	Geography	1	2	3	4	5
11.19	Geology	1	2	3	4	5
11.20	German	1	2	3	4	5
11.21	History	1	2	3	4	5
11.22	Home Economics	1	2	3	4	5
11.23	Journalism	1	2	3	4	5
11.24	Law	1	2	3	4	5
11.25	Linguistics	1	2	3	4	5
11.26	Mathematics	1	2	3	4	5
11.27	Medicine	1	2	3	4	5
11.28	Microbiology	1	2	3	4	5

	DEGREE OF RELEVANCE OF SUBJECT AREA (Circle ONE numeral)				
SUBJECT AREA	Not at all relevant				Extremely relevant
11.29 Music	1	2	3	4	5
11.30 Pharmacy	1	2	3	4	5
11.31 Philosophy	1	2	3	4	5
11.32 Physics	1	2	3	4	5
11.33 Political Science	1	2	3	4	5
11.34 Psychology	1	2	3	4	5
11.35 Religion/Theology	1	2	3	4	5
11.36 Romance Languages	1	2	3	4	5
11.37 Social Work	1	2	3	4	5
11.38 Sociology	1	2	3	4	5
11.39 Speech/Drama	1	2	3	4	5
11.40 Zoology	1	2	3	4	5

12. It has been argued that there is an optimum size of student body for an institution of higher education. Assuming a fixed rate of financial support per student, what do you think the optimal number of students on any one campus would be? (Check ONE box)

☐ Fewer than 2,000
☐ 2,000-5,000
☐ 5,000-10,000
☐ 10,000-20,000
☐ 20,000-30,000
☐ 30,000 or more

(Items 13-17) It has been noted that faculty members in American colleges and universities, having prepared themselves for teaching and research, increasingly find that they are forced to assume positions on social and political questions--matters from which the professoriate, until recently, seemed to be insulated.

13. Do you think most faculty members regularly assume positions on social and/or political questions? ☐ Yes ☐ No

14. Do you think most faculty members should regularly assume positions on social and/or political questions? ☐ Yes ☐ No

15. Do you think most faculty members feel any pressure to regularly assume positions on social and/or political questions? ☐ Yes ☐ No

16. If so, from whom do you feel such pressure originates? (Check ANY that apply)

☐ Colleagues at employing institution
☐ Colleagues outside employing institution
☐ Administrators at employing institution
☐ Students at employing institution
☐ Faculty member's own conscience
☐ Other (please specify) ____________________

17. Should faculty members be insulated from pressures to regularly assume positions on social and/or political questions? ☐ Yes ☐ No

(Items 18-20) When discussing various disciplines or subject areas in higher education (e.g., chemistry), one often thinks of institutions which are particularly outstanding in that field. That is, they have a combination of faculty expertise and program offerings which are of unusually high quality. In the area you listed in item 8 above, list the three institutions of higher education which you feel are the most outstanding in the country. Please order them from most outstanding to third most outstanding. RANK ONLY IN YOUR OWN AREA, NOT OVERALL.

18. ______________________________

19. ______________________________

20. ______________________________

A NATIONAL STUDY OF FACULTY VIEWS ON THE ROLE OF HIGHER EDUCATION

Please provide the following information: 1. _____ Highest earned degree _____ Year of degree _____ Major _____ Institution 2. _____ Sex

3. _____ Present academic rank 4. _____ If an administrator, title of present position 5. _____ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology")

6. _____ Highest degree offered at your institution in area you identified in item 5 7. Do you hold tenure in your present institution? _____

DIRECTIONS: The summarized responses to this questionnaire may be used to present general information about the role of higher education. It will be indicated that this information results from a broad base of professional opinion. Therefore, please answer each question carefully and frankly, using the following definitions.

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8. Listed below are 40 areas of specialization which one could typically pursue as a major course of study in higher education (although not necessarily in any one institution). For each area of specialization, please rate the degree to which you think each subject area is relevant to one of the commonly held goals of higher education--that of preparing or enabling people to function effectively and happily in contemporary society.

DEGREE OF RELEVANCE OF SUBJECT AREA

(Circle ONE numeral)

	SUBJECT AREA	Not at all relevant				Extremely relevant
8.1	Agriculture/Agronomy	1	2	3	4	5
8.2	Anthropology	1	2	3	4	5
8.3	Architecture	1	2	3	4	5
8.4	Art	1	2	3	4	5
8.5	Audiology/Speech Pathology	1	2	3	4	5
8.6	Biochemistry	1	2	3	4	5
8.7	Biology	1	2	3	4	5
8.8	Botany	1	2	3	4	5
8.9	Business Administration	1	2	3	4	5
8.10	Chemistry	1	2	3	4	5
8.11	Classical Languages	1	2	3	4	5
8.12	Economics	1	2	3	4	5
8.13	Education	1	2	3	4	5
8.14	Engineering	1	2	3	4	5
8.15	English	1	2	3	4	5
8.16	Environmental Studies	1	2	3	4	5
8.17	Forestry/Wildlife Mgmt.	1	2	3	4	5
8.18	Geography	1	2	3	4	5
8.19	Geology	1	2	3	4	5
8.20	German	1	2	3	4	5

DEGREE OF RELEVANCE OF SUBJECT AREA

(Circle ONE numeral)

	SUBJECT AREA	Not at all relevant				Extremely relevant
8.21	History	1	2	3	4	5
8.22	Home Economics	1	2	3	4	5
8.23	Journalism	1	2	3	4	5
8.24	Law	1	2	3	4	5
8.25	Linguistics	1	2	3	4	5
8.26	Mathematics	1	2	3	4	5
8.27	Medicine	1	2	3	4	5
8.28	Microbiology	1	2	3	4	5
8.29	Music	1	2	3	4	5
8.30	Pharmacy	1	2	3	4	5
8.31	Philosophy	1	2	3	4	5
8.32	Physics	1	2	3	4	5
8.33	Political Science	1	2	3	4	5
8.34	Psychology	1	2	3	4	5
8.35	Religion/Theology	1	2	3	4	5
8.36	Romance Languages	1	2	3	4	5
8.37	Social Work	1	2	3	4	5
8.38	Sociology	1	2	3	4	5
8.39	Speech/Drama	1	2	3	4	5
8.40	Zoology	1	2	3	4	5

9. RANK the four functions listed below in the order in which you think they are presently emphasized in higher education. Then RANK them in the order in which you feel they should be emphasized.

(Rank "1" as highest rank)

	CURRENT EMPHASIS	SHOULD BE EMPHASIZED
a. Instruction of students	_____	_____
b. Socialization of students	_____	_____
c. Conduct of research	_____	_____
d. Provision of services	_____	_____

10. It has been argued that there is an optimum size of student body for an institution of higher education. Assuming a fixed rate of financial support per student, what do you think the optimal number of students on any one campus would be? (Check ONE box)

☐ Fewer than 2,000 ☐ 2,000-5,000 ☐ 5,000-10,000 ☐ 10,000-20,000 ☐ 20,000-30,000 ☐ 30,000 or more

11. In relation to societal issues and problems, do you think institutions of higher education should play no role, an indirect role, or a direct role? (Check ONE box)

☐ No role

☐ An indirect role (e.g., institutions offering courses where societal issues are debated and solutions discussed)

☐ A direct role (e.g., institutions helping in a service capacity to resolve racial conflicts)

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8. Listed below are 40 areas of specialization which one could typically pursue as a major course of study in higher education (although not necessarily in any one institution). For each area of specialization, please rate the degree to which you think each subject area is relevant to one of the commonly held goals of higher education--that of preparing or enabling people to function effectively and happily in contemporary society.

		DEGREE OF RELEVANCE OF SUBJECT AREA (Circle ONE numeral)				
	SUBJECT AREA	Not at all relevant				Extremely relevant
8.1	Agriculture/Agronomy	1	2	3	4	5
8.2	Anthropology	1	2	3	4	5
8.3	Architecture	1	2	3	4	5
8.4	Art	1	2	3	4	5
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8.10	Chemistry	1	2	3	4	5
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8.12	Economics	1	2	3	4	5
8.13	Education	1	2	3	4	5
8.14	Engineering	1	2	3	4	5
8.15	English	1	2	3	4	5
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8.26	Mathematics	1	2	3	4	5
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8.29	Music	1	2	3	4	5
8.30	Pharmacy	1	2	3	4	5
8.31	Philosophy	1	2	3	4	5
8.32	Physics	1	2	3	4	5
8.33	Political Science	1	2	3	4	5
8.34	Psychology	1	2	3	4	5
8.35	Religion/Theology	1	2	3	4	5
8.36	Romance Languages	1	2	3	4	5
8.37	Social Work	1	2	3	4	5
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9. RANK the four functions listed below in the order in which you think they are presently emphasized in higher education. Then RANK them in the order in which you feel they should be emphasized.

	CURRENT EMPHASIS	SHOULD BE EMPHASIZED
	(Rank "1" as highest rank)	
a. Instruction of students	____	____
b. Socialization of students	____	____
c. Conduct of research	____	____
d. Provision of services	____	____

10. It has been argued that there is an optimum size of student body for an institution of higher education. Assuming a fixed rate of financial support per student, what do you think the optimal number of students on any one campus would be? (Check ONE box)

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11. In relation to societal issues and problems, do you think institutions of higher education should play no role, an indirect role, or a direct role? (Check ONE box)

☐ No role

☐ An indirect role (e.g., institutions offering courses where societal issues are debated and solutions discussed)

☐ A direct role (e.g., institutions helping in a service capacity to resolve racial conflicts)

(Items 12-16) It has been noted that faculty members in American colleges and universities, having prepared themselves for teaching and research, increasingly find that they are forced to assume positions on social and political questions--matters from which the professoriate, until recently, seemed to be insulated.

12. Do you think most faculty members regularly assume positions on social and/or political questions? ☐ Yes ☐ No

13. Do you think most faculty members should regularly assume positions on social and/or political questions? ☐ Yes ☐ No

14. Do you think most faculty members feel any pressure to regularly assume positions on social and/or political questions? ☐ Yes ☐ No

15. If you do think most faculty members feel pressure to regularly assume positions on social and/or political questions, from whom do you feel such pressure originates? (Check ANY that may apply)

- ☐ Colleagues at employing institution
- ☐ Colleagues outside employing institution
- ☐ Administrators at employing institution
- ☐ Students at employing institution
- ☐ Faculty member's own conscience
- ☐ Other (please specify) ____________________

16. Should faculty members be insulated from pressures to regularly assume positions on social and/or political questions?
☐ Yes ☐ No

(Items 17-25) In which of the following areas of current concern in society do you feel institutions of higher education should be directly involved, indirectly involved, or uninvolved? (Check ONE box for each item)

	DIRECTLY INVOLVED	INDIRECTLY INVOLVED	UNINVOLVED
17. pollution/environment	☐	☐	☐
18. education	☐	☐	☐
19. international policies of the U. S.	☐	☐	☐
20. national defense capabilities	☐	☐	☐
21. discrimination against minorities	☐	☐	☐
22. poverty and social welfare	☐	☐	☐
23. health	☐	☐	☐
24. economic crisis	☐	☐	☐
25. control of technology	☐	☐	☐

(Items 26-39) Please respond to each statement below by circling the response which best indicates the extent to which you agree or disagree with the statement.

26. It is one of the functions of higher education to prepare students to be active in the solution of social and political problems of this country.
Strongly Agree Agree Neutral Disagree Strongly Disagree

27. Institutions of higher education should be doing more (especially through their research and service programs) to alleviate some of the problems of modern America--e.g., the ecological crisis.
SA A N D SD

28. The general public thinks faculty members should restrict themselves to teaching and not get involved in social issues of the day.
SA A N D SD

29. The general public is swayed by the knowledge that faculty members support or oppose a particular social, racial, or economic issue.
SA A N D SD

30. Colleges and universities should be value free in that they should not take sides on social issues.
SA A N D SD

31. Faculty members should be criticized if their research and teaching are value free, detached from important issues such as racial justice, relief from poverty, pollution of the environment, and war and peace.
SA A N D SD

32. When planning curricula, it is important that the interests of subject matter fields be considered in concert with the needs of society, not separate from those needs or from one another.
SA A N D SD

33. Institutions of higher education should refrain from emphasizing courses which focus on societal problems (e.g., minority problems) and devote more time to teaching the basic arts and sciences.
SA A N D SD

34. Increased specialization in higher education is detrimental in that people are becoming too narrow.
SA A N D SD

35. The generation of new knowledge should be the major goal of institutions of higher education.
SA A N D SD

36. Institutions of higher education should offer a general undergraduate degree such as the Bachelor of Liberal Arts.
SA A N D SD

37. Higher education would benefit if, for the most part, undergraduates

	DIRECTLY INVOLVED	INDIRECTLY INVOLVED	UNINVOLVED
17. pollution/environment	☐	☐	☐
18. education	☐	☐	☐
19. international policies of the U. S.	☐	☐	☐
20. national defense capabilities	☐	☐	☐
21. discrimination against minorities	☐	☐	☐
22. poverty and social welfare	☐	☐	☐
23. health	☐	☐	☐
24. economic crisis	☐	☐	☐
25. control of technology	☐	☐	☐

(Items 26-39) Please respond to each statement below by circling the response which best indicates the extent to which you agree or disagree with the statement.

26. It is one of the functions of higher education to prepare students to be active in the solution of social and political problems of this country.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

27. Institutions of higher education should be doing more (especially through their research and service programs) to alleviate some of the problems of modern America--e.g., the ecological crisis.

SA   A   N   D   SD

28. The general public thinks faculty members should restrict themselves to teaching and not get involved in social issues of the day.

SA   A   N   D   SD

29. The general public is swayed by the knowledge that faculty members support or oppose a particular social, racial, or economic issue.

SA   A   N   D   SD

30. Colleges and universities should be value free in that they should not take sides on social issues.

SA   A   N   D   SD

31. Faculty members should be criticized if their research and teaching are value free, detached from important issues such as racial justice, relief from poverty, pollution of the environment, and war and peace.

SA   A   N   D   SD

32. When planning curricula, it is important that the interests of subject matter fields be considered in concert with the needs of society, not separate from those needs or from one another.

SA   A   N   D   SD

33. Institutions of higher education should refrain from emphasizing courses which focus on societal problems (e.g., minority problems) and devote more time to teaching the basic arts and sciences.

SA   A   N   D   SD

34. Increased specialization in higher education is detrimental in that people are becoming too narrow.

SA   A   N   D   SD

35. The generation of new knowledge should be the major goal of institutions of higher education.

SA   A   N   D   SD

36. Institutions of higher education should offer a general undergraduate degree such as the Bachelor of Liberal Arts.

SA   A   N   D   SD

37. Higher education would benefit if, for the most part, undergraduates were advised or required to attend 2- and 4-year colleges, thus allowing universities to focus more on graduate education.

SA   A   N   D   SD

38. Admission requirements should allow the entrance of all students but, once enrolled, all students should be expected to perform at the same level.

SA   A   N   D   SD

39. All students, including minority group members, should be expected to meet the same requirements for admission to a particular college or university.

SA   A   N   D   SD

40. When discussing various disciplines or subject areas in higher education (e.g., chemistry), one often thinks of institutions which are particularly outstanding in that field. That is, they have a combination of faculty expertise and program offerings which are of unusually high quality. In the area you listed in item 5 above, list the three institutions of higher education which you feel are the most outstanding in the country. Please order them from most outstanding to third most outstanding. RANK ONLY IN YOUR OWN AREA, NOT OVERALL.

1. ____________   2. ____________   3. ____________

A NATIONAL STUDY OF FACULTY VIEWS
ON THE ROLE OF HIGHER EDUCATION

Please provide the following information: 1. ____________ Highest earned degree 2. ________ Year of degree

3. ____________ Major 4. ____________ Degree-granting institution 5. ______ Sex

6. ____________ Present academic rank 7. ____________ If an administrator, title of present position

8. ____________ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology")

9. ____________ Highest degree offered at your institution in area you identified in item 8

10. Do you hold tenure in your present institution? ________

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11. Listed below are 40 areas of specialization which one could typically pursue as a major course of study in higher education (although not necessarily in any one institution). For each area of specialization, please rate the degree to which you think each subject area is relevant to one of the commonly held goals of higher education--that of preparing or enabling people to function effectively and happily in contemporary society.

DEGREE OF RELEVANCE OF SUBJECT AREA

(Circle ONE numeral)

	SUBJECT AREA	Not at all relevant				Extremely relevant
11.1	Agriculture/Agronomy	1	2	3	4	5
11.2	Anthropology	1	2	3	4	5
11.3	Architecture	1	2	3	4	5
11.4	Art	1	2	3	4	5
11.5	Audiology/Speech Pathology	1	2	3	4	5
11.6	Biochemistry	1	2	3	4	5
11.7	Biology	1	2	3	4	5
11.8	Botany	1	2	3	4	5
11.9	Business Administration	1	2	3	4	5
11.10	Chemistry	1	2	3	4	5
11.11	Classical Languages	1	2	3	4	5
11.12	Economics	1	2	3	4	5

(Item 11 continued)

SUBJECT AREA	DEGREE OF RELEVANCE OF SUBJECT AREA (Circle ONE numeral) Not at all relevant				Extremely relevant
11.13 Education	1	2	3	4	5
11.14 Engineering	1	2	3	4	5
11.15 English	1	2	3	4	5
11.16 Environmental Studies	1	2	3	4	5
11.17 Forestry/Wildlife Mgmt.	1	2	3	4	5
11.18 Geography	1	2	3	4	5
11.19 Geology	1	2	3	4	5
11.20 German	1	2	3	4	5
11.21 History	1	2	3	4	5
11.22 Home Economics	1	2	3	4	5
11.23 Journalism	1	2	3	4	5
11.24 Law	1	2	3	4	5
11.25 Linguistics	1	2	3	4	5
11.26 Mathematics	1	2	3	4	5
11.27 Medicine	1	2	3	4	5
11.28 Microbiology	1	2	3	4	5
11.29 Music	1	2	3	4	5
11.30 Pharmacy	1	2	3	4	5
11.31 Philosophy	1	2	3	4	5
11.32 Physics	1	2	3	4	5
11.33 Political Science	1	2	3	4	5
11.34 Psychology	1	2	3	4	5
11.35 Religion/Theology	1	2	3	4	5
11.36 Romance Languages	1	2	3	4	5
11.37 Social Work	1	2	3	4	5
11.38 Sociology	1	2	3	4	5
11.39 Speech/Drama	1	2	3	4	5
11.40 Zoology	1	2	3	4	5

12. It has been argued that there is an optimum size of student body for an institution of higher education. Assuming a fixed rate of financial support per student, what do you think the optimal number of students on any one campus would be? (Check ONE box)

☐ Fewer than 2,000
☐ 2,000-5,000
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☐ 10,000-20,000
☐ 20,000-30,000
☐ 30,000 or more

(Items 13-17) It has been noted that faculty members in American colleges and universities, having prepared themselves for teaching and research, increasingly find that they are forced to assume positions on social and political questions--matters from which the professoriate, until recently, seemed to be insulated.

13. Do you think most faculty members regularly assume positions on social and/or political questions? ☐ Yes ☐ No

14. Do you think most faculty members should regularly assume positions on social and/or political questions? ☐ Yes ☐ No

15. Do you think most faculty members feel any pressure to regularly assume positions on social and/or political questions? ☐ Yes ☐ No

16. If so, from whom do you feel such pressure originates? (Check ANY that apply)

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☐ Colleagues outside employing institution
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☐ Other (please specify) ______________________________

17. Should faculty members be insulated from pressures to regularly assume positions on social and/or political questions? ☐ Yes ☐ No

(Items 18-20) When discussing various disciplines or subject areas in higher education (e.g., chemistry), one often thinks of institutions which are particularly outstanding in that field. That is, they have a combination of faculty expertise and program offerings which are of unusually high quality. In the area you listed in item 8 above, list the three institutions of higher education which you feel are the most outstanding in the country. Please order them from most outstanding to third most outstanding. RANK ONLY IN YOUR OWN AREA, NOT OVERALL.

18. ______________________
19. ______________________
20. ______________________

A NATIONAL STUDY OF FACULTY VIEWS ON THE ROLE OF HIGHER EDUCATION

Please provide the following information: 1. ____________ ________ ________ ____________
Highest earned degree | Year of degree | Major | Institution

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5. ____________________
Present major area of teaching or professional identification
(use general categories--e.g., "psychology," not "social psychology")

6. ____________________
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8.27	Medicine	1	2	3	4	5
8.28	Microbiology	1	2	3	4	5

DEGREE OF RELEVANCE
OF SUBJECT AREA

(Circle ONE numeral)

	SUBJECT AREA	Not at all relevant				Extremely relevant
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8.30	Pharmacy	1	2	3	4	5
8.31	Philosophy	1	2	3	4	5
8.32	Physics	1	2	3	4	5
8.33	Political Science	1	2	3	4	5
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(Rank "1" as highest rank)

	CURRENT EMPHASIS	SHOULD BE EMPHASIZED
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11. In relation to societal issues and problems, do you think institutions of higher education should play no role, an indirect role, or a direct role? (Check ONE box)

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☐ An indirect role (e.g., institutions offering courses where societal issues are debated and solutions discussed)

☐ A direct role (e.g., institutions helping in a service capacity to resolve racial conflicts)

(Items 12-16) It has been noted that faculty members in American colleges and universities, having prepared themselves for teaching and research, increasingly find that they are forced to assume positions on social and political questions--matters from which the professoriate, until recently, seemed to be insulated.

12. Do you think most faculty members regularly assume positions on social and/or political questions? ☐ Yes ☐ No

13. Do you think most faculty members should regularly assume positions on social and/or political questions? ☐ Yes ☐ No

14. Do you think most faculty members feel any pressure to regularly assume positions on social and/or political questions? ☐ Yes ☐ No

15, If so, from whom do you feel such pressure originates? (Check ANY that may apply)

☐ Colleagues at employing institution
☐ Colleagues outside employing institution
☐ Administrators at employing institution
☐ Students at employing institution
☐ Faculty member's own conscience
☐ Other (please specify) ____________________

16. Should faculty members be insulated from pressures to regularly assume positions on social and/or political questions? ☐ Yes ☐ No

(Items 17-25) In which of the following areas of current concern in society do you feel institutions of higher education should be directly involved, indirectly involved, or uninvolved? (Check ONE box for each item)

	DIRECTLY INVOLVED	INDIRECTLY INVOLVED	UNINVOLVED
17. pollution/environment	☐	☐	☐
18. education	☐	☐	☐
19. international policies of the U. S.	☐	☐	☐
20. national defense capabilities	☐	☐	☐
21. discrimination against minorities	☐	☐	☐
22. poverty and social welfare	☐	☐	☐
23. health	☐	☐	☐
24. economic crisis	☐	☐	☐
25. control of technology	☐	☐	☐

(Items 26-39) Please respond to each statement below by circling the response which best indicates the extent to which you agree or disagree with the statement.

26. It is one of the functions of higher education to prepare students to be active in the solution of social and political problems of this country.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

27. Institutions of higher education should be doing more (especially through their research and service programs) to alleviate some of the problems of modern America--e.g., the ecological crisis.

SA   A   N   D   SD

28. The general public thinks faculty members should restrict themselves to teaching and not get involved in social issues of the day.

SA   A   N   D   SD

29. The general public is swayed by the knowledge that faculty members support or oppose a particular social, racial, or economic issue.

SA   A   N   D   SD

30. Colleges and universities should be value free in that they should not take sides on social issues.

SA   A   N   D   SD

31. Faculty members should be criticized if their research and teaching are value free, detached from important issues such as racial justice, relief from poverty, pollution of the environment, and war and peace.

SA   A   N   D   SD

32. When planning curricula, it is important that the interests of subject matter fields be considered in concert with the needs of society, not separate from those needs or from one another.

SA   A   N   D   SD

33. Institutions of higher education should refrain from emphasizing courses which focus on societal problems (e.g., minority problems) and devote more time to teaching the basic arts and sciences.

SA   A   N   D   SD

34. Increased specialization in higher education is detrimental in that people are becoming too narrow.

SA   A   N   D   SD

35. The generation of new knowledge should be the major goal of institutions of higher education.

SA   A   N   D   SD

36. Institutions of higher education should offer a general undergraduate degree such as the Bachelor of Liberal Arts.

SA   A   N   D   SD

37. Higher education would benefit if, for the most part, undergraduates were advised or required to attend 2- and 4-year colleges, thus allowing universities to focus more on graduate education.

SA   A   N   D   SD

38. Admission requirements should allow the entrance of all students but, once enrolled, all students should be expected to perform at the same level.

SA   A   N   D   SD

39. All students, including minority group members, should be expected to meet the same requirements for admission to a particular college or university.

SA   A   N   D   SD

40. When discussing various disciplines or subject areas in higher education (e.g., chemistry), one often thinks of institutions which are particularly outstanding in that field. That is, they have a combination of faculty expertise and program offerings which are of unusually high quality. In the area you listed in item 5 above, list the three institutions of higher education which you feel are the most outstanding in the country. Please order them from most outstanding to third most outstanding. RANK ONLY IN YOUR OWN AREA, NOT OVERALL.

1. ____________________   2. ____________________   3. ____________________

A NATIONAL STUDY OF FACULTY VIEWS ON GOVERNANCE OF HIGHER EDUCATION

Please provide the following information: 1. ______ Highest earned degree ______ Year of degree ______ Major

______ Degree-granting institution 2. ______ Sex 3. ______ Present academic rank 4. ______ If an administrator, title of present position

5. ______ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology")

6. ______ Highest degree offered at your institution in area you identified in item 5

7. Do you hold tenure in your present institution? ______

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8. If your institution were structured so that the department and/or division chairmanship were rotated among the faculty every two or three years, would you be comfortable assuming that position when your turn came?

☐ Yes ☐ No

(Items 9-17) For each of the following decisions relating to governance of higher education, please rank the four groups named below in the order (from 1 to 4) of who should have primary responsibility for making that particular decision. (Rank the group which you feel should have the most responsibility for decision making as "1.")

RESPONSIBILITY FOR DECISION MAKING SHOULD BE HELD BY

(Rank in order)

	Governing Board	Administrators	Faculty	Students
9. Decisions about setting standards for student conduct	____	____	____	____
10. Decisions about policies for student admission, retention	____	____	____	____
11. Decisions about procedures for registration, academic advising	____	____	____	____
12. Decisions about student discipline	____	____	____	____
13. Decisions about ethnic or sex composition of student body	____	____	____	____
14. Decisions about ethnic or sex composition of faculty	____	____	____	____
15. Decisions about adoption of new courses	____	____	____	____
16. Decisions about who will participate in formulation of the institution's budget	____	____	____	____
17. Decisions about faculty or administrative support services (e.g., money for travel or long distance telephone calls)	____	____	____	____

18. Part of governance is making decisions about the appointment, promotion, salary, and retention of academic personnel. Such decisions can be made on the basis of a variety of types of direct or indirect data. Which data sources are used in your institution in making decisions about faculty promotions, tenure, etc.? (Check ANY that apply)

☐ Formal student evaluations of professor's teaching

☐ Indirect student evaluations of professor's teaching (e.g., complaints to department chairman)

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☐ Formal ratings of professor by colleagues

☐ Number of publications

☐ Quality of publications (as judged by reading them or by the quality of journals in which they appear)

☐ Amount of outside money brought in through grants, contracts, etc.

☐ Number of offices held in state, regional, or national associations

☐ National or regional reputation (e.g., honors received, demand for speeches or participation in meetings)

☐ Other (please specify) ______________________________

(Items 19-20) On most college campuses today, it is recognized that there is a need for student participation in governance. Debate still exists, however, on the best way to implement that participation.

19. Would you agree that students should be involved in campus governance? ☐ Yes ☐ No

20. In the left-hand column below, indicate which of the following campus- or department-wide committees should have student representation. For each of the committees you think should have student representation, in the right-hand columns indicate whether you feel students should serve in an advisory or voting role. Then give the approximate percentage of the committee which you think should be composed of student members.

		(Check ONE of these two)		
SHOULD HAVE Student Representation	COMMITTEE	ADVISORY Membership	VOTING Membership	PERCENT OF Student Members on Committee
☐	a. Student activities	☐	☐	____
☐	b. Physical plant	☐	☐	____
☐	c. Budget	☐	☐	____
☐	d. Student admissions	☐	☐	____
☐	e. Graduation requirements	☐	☐	____
☐	f. Faculty recruitment and hiring	☐	☐	____
☐	g. Administrator recruitment and hiring	☐	☐	____
☐	h. Promotion and tenure	☐	☐	____
☐	i. Curriculum	☐	☐	____
☐	j. Athletics	☐	☐	____
☐	k. Library	☐	☐	____
☐	l. Discipline	☐	☐	____

A NATIONAL STUDY OF FACULTY VIEWS ON GOVERNANCE OF HIGHER EDUCATION

Please provide the following information: 1. ______ Highest earned degree 2. ______ Year of degree 3. ______ Major 4. ______ Degree-granting institution

5. ______ Sex 6. ______ Present academic rank 7. ______ If an administrator, title of present position

8. ______ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology") 9. ______ Highest degree offered at your institution in area you identified in item 8

10. Do you hold tenure in your present institution? ______

DIRECTIONS: The summarized responses to this questionnaire may be used as the basis for published recommendations on governance of institutions of higher education. These recommendations will be reported as resting upon the opinions of faculty and administrators. Therefore, please answer each question carefully and frankly, using the following definitions.

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(Items 11-34) The following items are intended to elicit your opinions about participation of various groups (e.g., faculty members) in major categories of decisions relating to higher education. In the left-hand column, please indicate the degree to which you think the group named in the item NOW participates, either individually or collectively, in decision making in each category at your institution. In the right-hand column, indicate the degree to which you think the group named SHOULD participate, either individually or collectively, in decision making in each category at your institution. Please use the following definitions in responding:

None = No participation of any kind Moderate = Offering informal opinions or being asked for advice

Considerable = Serving on formally organized groups charged with making recommendations or establishing policy

(Items 11-16) Please rate the participation of institutional GOVERNING BOARDS (e.g., regents, trustees) in each of the following categories of decisions.

Participation IS NOW				Participation SHOULD BE		
None	Moderate	Considerable	Types of Decision	None	Moderate	Considerable
(Circle ONE)				(Circle ONE)		
1	2	3	11. Budgeting decisions (internal to the institution)	1	2	3
1	2	3	12. Building and plant decisions--physical facilities	1	2	3
1	2	3	13. Curriculum and instruction decisions	1	2	3
1	2	3	14. Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	15. Administrative personnel policy decisions (e.g., hiring & retention)	1	2	3
1	2	3	16. Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

(Items 17-22) Please rate the participation of academic ADMINISTRATORS (e.g., deans, presidents) in each of the following categories of decisions.

Participation IS NOW				Participation SHOULD BE		
None	Moderate	Considerable	Types of Decision	None	Moderate	Considerable
(Circle ONE)				(Circle ONE)		
1	2	3	17. Budgeting decisions (internal to the institution)	1	2	3
1	2	3	18. Building and plant decisions--physical facilities	1	2	3
1	2	3	19. Curriculum and instruction decisions	1	2	3
1	2	3	20. Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	21. Administrative personnel policy decisions (e.g., hiring & retention)	1	2	3
1	2	3	22. Student personnel policy decisions (			

DIRECTIONS: The summarized responses to this questionnaire may be used as the basis for published recommendations on governance of institutions of higher education. These recommendations will be reported as resting upon the opinions of faculty and administrators. Therefore, please answer each question carefully and frankly, using the following definitions.

"INSTITUTION" refers to any university or 4-year college. "DEPARTMENT" refers to the smallest institutional unit (e.g., college, school, or division) with budgetary autonomy. "ADMINISTRATOR" refers to anyone who administers a department (as defined above) or any larger unit, including the entire institution. "EXTERNAL AGENCY" refers to a state legislature, a church governing board, or any other external agency to which an institution of higher education may be responsible, fiscally or otherwise.

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(Items 11-16) Please rate the participation of institutional GOVERNING BOARDS (e.g., regents, trustees) in each of the following categories of decisions.

Participation IS NOW				Participation SHOULD BE		
None	Moderate	Considerable	Types of Decision	None	Moderate	Considerable
(Circle ONE)				(Circle ONE)		
1	2	3	11. Budgeting decisions (internal to the institution)	1	2	3
1	2	3	12. Building and plant decisions--physical facilities	1	2	3
1	2	3	13. Curriculum and instruction decisions	1	2	3
1	2	3	14. Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	15. Administrative personnel policy decisions (e.g., hiring & retention)	1	2	3
1	2	3	16. Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

(Items 17-22) Please rate the participation of academic ADMINISTRATORS (e.g., deans, presidents) in each of the following categories of decisions.

Participation IS NOW				Participation SHOULD BE		
None	Moderate	Considerable	Types of Decision	None	Moderate	Considerable
(Circle ONE)				(Circle ONE)		
1	2	3	17. Budgeting decisions (internal to the institution)	1	2	3
1	2	3	18. Building and plant decisions--physical facilities	1	2	3
1	2	3	19. Curriculum and instruction decisions	1	2	3
1	2	3	20. Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	21. Administrative personnel policy decisions (e.g., hiring & retention)	1	2	3
1	2	3	22. Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

(Items 23-28) Please rate the participation of FACULTY MEMBERS in each of the following categories of decisions.

Participation IS NOW				Participation SHOULD BE		
None	Moderate	Considerable	Types of Decision	None	Moderate	Considerable
(Circle ONE)				(Circle ONE)		
1	2	3	23. Budgeting decisions (internal to the institution)	1	2	3
1	2	3	24. Building and plant decisions--physical facilities	1	2	3
1	2	3	25. Curriculum and instruction decisions	1	2	3
1	2	3	26. Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	27. Administrative personnel policy decisions (e.g., hiring & retention)	1	2	3
1	2	3	28. Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

(Items 29-34) Please rate the participation of STUDENTS in each of the following categories of decisions.

Participation IS NOW None	 Moderate	 Considerable	Types of Decision	Participation SHOULD BE None	 Moderate	 Considerable
(Circle ONE)				(Circle ONE)		
1	2	3	29. Budgeting decisions (internal to the institution)	1	2	3
1	2	3	30. Building and plant decisions--physical facilities	1	2	3
1	2	3	31. Curriculum and instruction decisions	1	2	3
1	2	3	32. Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	33. Administrative personnel policy decisions (e.g., hiring & retention)	1	2	3
1	2	3	34. Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

35. If your institution were structured so that the department and/or division chairmanship were rotated among the faculty every two or three years, would you be comfortable assuming that position when your turn came? ☐ Yes ☐ No

36. For each of the following decisions relating to governance of higher education, please rank the four groups named below in the order (from 1 to 4) of who should have primary responsibility for making that particular decision. (Rank the group which you feel should have the most responsibility for decision making as "1")

	RESPONSIBILITY FOR DECISION MAKING SHOULD BE HELD BY (Rank in order) Governing Board	 Administrators	 Faculty	 Students
a. Decisions about setting standards for student conduct	____	____	____	____
b. Decisions about policies for student admission, retention	____	____	____	____
c. Decisions about procedures for registration, academic advising	____	____	____	____
d. Decisions about student discipline	____	____	____	____
e. Decisions about ethnic or sex composition of student body	____	____	____	____
f. Decisions about ethnic or sex composition of faculty	____	____	____	____
g. Decisions about adoption of new courses	____	____	____	____
h. Decisions about who will participate in formulation of the institution's budget	____	____	____	____
i. Decisions about priorities or educational specifications for proposed new buildings and facilities	____	____	____	____
j. Decisions about faculty or administrative support services (e.g., money for travel or long distance telephone calls)	____	____	____	____
k. Decisions about procedures for accounting for expenditures of funds	____	____	____	____

37. Part of governance is making decisions about the appointment, promotion, salary, and retention of academic personnel. Such decisions can be made on the basis of a variety of types of direct or indirect data. Which data sources are used in your institution in making decisions about faculty promotions, tenure, etc.? (Check ANY that apply)

☐ Formal student evaluations of professor's teaching
☐ Indirect student evaluations of professor's teaching (e.g., complaints to department chairman)
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☐ Formal ratings of professor by colleagues
☐ Number of publications
☐ Quality of publications (as judged by reading them or by the quality of journals in which they appear)
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☐ Number of offices held in state, regional, or national associations
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☐ Other (please specify) ______________________________

(Items 38-40) On most college campuses today, it is recognized that there is a need for student participation in governance. Debate still exists, however, on the best way to implement that participation.

38. Would you agree that students should be involved in campus governance? ☐ Yes ☐ No

In the left-hand column below (item 39), indicate which of the following campus- or department-wide committees should have student representation. For each of the committees you think should have student representation, in the right-hand columns (item 40), indicate whether you feel students should serve in an advisory or voting role. Then give the approximate percentage of the committee which you think should be composed of student members.

1	2	3	30.	Building and plant decisions--physical facilities	1	2	3
1	2	3	31.	Curriculum and instruction decisions	1	2	3
1	2	3	32.	Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
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1	2	3	34.	Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

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	Governing Board	Administrators	Faculty	Students
a. Decisions about setting standards for student conduct	____	____	____	____
b. Decisions about policies for student admission, retention	____	____	____	____
c. Decisions about procedures for registration, academic advising	____	____	____	____
d. Decisions about student discipline	____	____	____	____
e. Decisions about ethnic or sex composition of student body	____	____	____	____
f. Decisions about ethnic or sex composition of faculty	____	____	____	____
g. Decisions about adoption of new courses	____	____	____	____
h. Decisions about who will participate in formulation of the institution's budget	____	____	____	____
i. Decisions about priorities or educational specifications for proposed new buildings and facilities	____	____	____	____
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39. SHOULD HAVE Student Representation	COMMITTEE	40. (Check ONE of these two) ADVISORY Membership	VOTING Membership	PERCENT of Student Members on Committee
☐	a. Student activities	☐	☐	____
☐	b. Physical plant	☐	☐	____
☐	c. Budget	☐	☐	____
☐	d. Student admissions	☐	☐	____
☐	e. Graduation requirements	☐	☐	____
☐	f. Faculty recruitment and hiring	☐	☐	____
☐	g. Administrator recruitment and hiring	☐	☐	____
☐	h. Promotion and tenure	☐	☐	____
☐	i. Curriculum	☐	☐	____
☐	j. Athletics	☐	☐	____
☐	k. Library	☐	☐	____
☐	l. Discipline	☐	☐	____

A NATIONAL STUDY OF FACULTY VIEWS ON GOVERNANCE OF HIGHER EDUCATION

Please provide the following information: 1. ____________ Highest earned degree ____________ Year of degree

____________ Major ____________ Degree-granting institution 2. ________ Sex

3. ____________ Present academic rank 4. ____________ If an administrator, title of present position

5. ____________ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology")

6. ____________ Highest degree offered at your institution in area you identified in item 5

7. Do you hold tenure in your present institution? ________

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11. Decisions about procedures for registration, academic advising	______	______	______	______

	RESPONSIBILITY FOR DECISION MAKING SHOULD BE HELD BY (Rank in order)			
	Governing Board	Administrators	Faculty	Students
12. Decisions about student discipline	_____	_____	_____	_____
13. Decisions about ethnic or sex composition of student body	_____	_____	_____	_____
14. Decisions about ethnic or sex composition of faculty	_____	_____	_____	_____
15. Decisions about adoption of new courses	_____	_____	_____	_____
16. Decisions about who will participate in formulation of the institution's budget	_____	_____	_____	_____
17. Decisions about faculty or administrative support services (e.g., money for travel or long distance telephone calls)	_____	_____	_____	_____

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☐	e. Graduation requirements	☐	☐	____
☐	f. Faculty recruitment and hiring	☐	☐	____
☐	g. Administrator recruitment and hiring	☐	☐	____
☐	h. Promotion and tenure	☐	☐	____
☐	i. Curriculum	☐	☐	____
☐	j. Athletics	☐	☐	____
☐	k. Library	☐	☐	____
☐	l. Discipline	☐	☐	____

A NATIONAL STUDY OF FACULTY VIEWS ON GOVERNANCE OF HIGHER EDUCATION

Please provide the following information:

1. ______ Highest earned degree
2. ______ Year of degree
3. ______ Major
4. ______ Degree-granting institution
5. ______ Sex
6. ______ Present academic rank
7. ______ If an administrator, title of present position
8. ______ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology")
9. ______ Highest degree offered at your institution in area you identified in item 8
10. Do you hold tenure in your present institution? ______

DIRECTIONS: The summarized responses to this questionnaire may be used as the basis for published recommendations on governance of institutions of higher education. These recommendations will be reported as resting upon the opinions of faculty and administrators. Therefore, please answer each question carefully and frankly, using the following definitions.

"INSTITUTION" refers to any university or 4-year college. "DEPARTMENT" refers to the smallest institutional unit (e.g., college, school, or division) with budgetary autonomy. "ADMINISTRATOR" refers to anyone who administers a department (as defined above) or any larger unit, including the entire institution. "EXTERNAL AGENCY" refers to a state legislature, a church governing board, or any other external agency to which an institution of higher education may be responsible, fiscally or otherwise.

(Items 11-34) The following items are intended to elicit your opinions about participation of various groups (e.g., faculty members) in major categories of decisions relating to higher education. In the left-hand column, please indicate the degree to which you think the group named in the item NOW participates, either individually or collectively, in decisions making in each category at your institution. In the right-hand column, indicate the degree to which you think the group named SHOULD participate, either individually or collectively, in decision making in each category at your institution. Please use the following definitions in responding:

None = No participation of any kind Moderate = Offering informal opinions or being asked for advice

Considerable = Serving on formally organized groups charged with making recommendations or establishing policy

(Items 11-16) Please rate the participation of institutional GOVERNING BOARDS (e.g., regents, trustees) in each of the following categories of decisions.

Participation IS NOW				Participation SHOULD BE		
None	Moderate	Considerable	Types of Decision	None	Moderate	Considerable
(Circle ONE)				(Circle ONE)		
1	2	3	11. Budgeting decisions (internal to the institution)	1	2	3
1	2	3	12. Building and plant decisions--physical facilities	1	2	3
1	2	3	13. Curriculum and instruction decisions	1	2	3
1	2	3	14. Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	15. Administrative personnel policy decisions (e.g., hiring & retention)	1	2	3
1	2	3	16. Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

(Items 17-22) Please rate the participation of academic ADMINISTRATORS (e.g., deans, presidents) in each of the following categories of decisions.

Participation IS NOW				Participation SHOULD BE		
None	Moderate	Considerable	Types of Decision	None	Moderate	Considerable
(Circle ONE)				(Circle ONE)		
1	2	3	17. Budgeting decisions (internal to the institution)	1	2	3
1	2	3	18. Building and plant decisions--physical facilities	1	2	3
1	2	3	19. Curriculum and instruction decisions	1	2	3
1	2	3	20. Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	21. Administrative personnel policy decisions (e.g., hiring & retention	1	2	3
1	2	3	22. Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

(Items 23-28) Please rate the participation of FACULTY MEMBERS in each of the following categories of decisions.

Participation IS NOW					Participation SHOULD BE		
None	Moderate	Considerable		Types of Decision	None	Moderate	Considerable
(Circle ONE)					(Circle ONE)		
1	2	3	23.	Budgeting decisions (internal to the institution)	1	2	3
1	2	3	24.	Building and plant decisions--physical facilities	1	2	3
1	2	3	25.	Curriculum and instruction decisions	1	2	3
1	2	3	26.	Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	27.	Administrative personnel policy decisions (e.g., hiring & retention)	1	2	3
1	2	3	28.	Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

(Items 29-34) Please rate the participation of STUDENTS in each of the following categories of decisions.

Participation IS NOW					Participation SHOULD BE		
None	Moderate	Considerable		Types of Decision	None	Moderate	Considerable
(Circle ONE)					(Circle ONE)		
1	2	3	29.	Budgeting decisions (internal to the institution)	1	2	3
1	2	3	30.	Building and plant decisions--physical facilities	1	2	3
1	2	3	31.	Curriculum and instruction decisions	1	2	3
1	2	3	32.	Faculty personnel policy decisions (e.g., hiring & tenure)	1	2	3
1	2	3	33.	Administrative personnel policy decisions (e.g., hiring & retention)	1	2	3
1	2	3	34.	Student personnel policy decisions (e.g., admissions, graduation, discipline)	1	2	3

35. If your institution were structured so that the department and/or division chairmanship were rotated among the faculty every two or three years, would you be comfortable assuming that position when your turn came? ☐ Yes ☐ No

36. For each of the following decisions relating to governance of higher education, please rank the four groups named below in the order (from 1 to 4) of who should have primary responsibility for making that particular decision. (Rank the group which you feel should have the most responsibility for decision making as "1")

	RESPONSIBILITY FOR DECISION MAKING SHOULD BE HELD BY (Rank in order)			
	Governing Board	Administrators	Faculty	Students
a. Decisions about setting standards for student conduct	______	______	______	______
b. Decisions about policies for student admission, retention	______	______	______	______
c. Decisions about procedures for registration, academic advising	______	______	______	______
d. Decisions about student discipline	______	______	______	______
e. Decisions about ethnic or sex composition of student body	______	______	______	______
f. Decisions about ethnic or sex composition of faculty	______	______	______	______
g. Decisions about adoption of new courses	______	______	______	______
h. Decisions about who will participate in formulation of the institution's budget	______	______	______	______
i. Decisions about priorities or educational specifications for proposed new buildings and facilities	______	______	______	______
j. Decisions about faculty or administrative support services (e.g., money for travel or long distance telephone calls)	______	______	______	______
k. Decisions about procedures for accounting for expenditures of funds	______	______	______	______

37. Part of governance is making decisions about the appointment, promotion, salary, and retention of academic personnel. Such decisions can be made on the basis of a variety of types of direct or indirect data. Which data sources are used in your institution in making decisions about faculty promotions, tenure, etc.? (Check ANY that apply)

☐ Formal student evaluations of professor's teaching

☐ Indirect student evaluations of professor's teaching (e.g., complaints to department chairman)

☐ Observations of professor's teaching by superiors (e.g., department chairman)

☐ Formal ratings of professor by colleagues

☐ Number of publications

☐ Quality of publications (as judged by reading them or by the quality of journals in which they appear)

☐ Amount of outside money brought in through grants, contracts, etc.

☐ Number of offices held in state, regional, or national associations

☐ National or regional reputation (e.g., honors received, demand for speeches or participation in meetings)

☐ Other (please specify) ______________________________

(Items 38-40) On most college campuses today, it is recognized that there is a need for student participation in governance. Debate still exists, however, on the best way to implement that participation.

38. Would you agree that students should be involved in campus governance? ☐ Yes ☐ No

In the left-hand column below (item 39), indicate which of the following campus- or department-wide committees should have student representation. For each of the committees you think should have student representation, in the right-hand columns (item 40), indicate whether you feel students should serve in an advisory or voting role. Then give the approximate percentage of the committee which you think should be composed of student members.

39. SHOULD HAVE Student Representation	COMMITTEE	40. ADVISORY Membership (Check ONE of these two)	VOTING Membership	PERCENT of Student Members on Committee
☐	a. Student activities	☐	☐	______
☐	b. Physical plant	☐	☐	______
☐	c. Budget	☐	☐	______
☐	d. Student admissions	☐	☐	______
☐	e. Graduation requirements	☐	☐	______
☐	f. Faculty recruitment and hiring	☐	☐	______
☐	g. Administrator recruitment and hiring	☐	☐	______
☐	h. Promotion and tenure	☐	☐	______
☐	i. Curriculum	☐	☐	______
☐	j. Athletics	☐	☐	______
☐	k. Library	☐	☐	______
☐	l. Discipline	☐	☐	______

A NATIONAL STUDY OF FACULTY VIEWS ON CONTROL OF HIGHER EDUCATION

Please provide the following information: 1. ____________ Highest earned degree 2. ____________ Year of degree 3. ____________ Major

4. ____________ Degree-granting institution 5. ________ Sex 6. ____________ Present academic rank 7. ____________ If an administrator, title of present position

8. ____________ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology")

9. ____________ Highest degree offered at your institution in area you identified in item 8 10. Do you hold tenure in your present institution? ________

DIRECTIONS: The summarized responses to this questionnaire may be used as the basis for recommendations to state legislatures and to bodies which have similar responsibilities for private institutions of higher education. Therefore, please answer each question carefully and frankly, using the following definitions.

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11. In answering this item, assume that the present trend toward external control of institutions of higher education has become a reality for your institution. Assume that there is no longer a question of IF there will be greater outside control of your institution but only of WHAT specifically will be controlled by external agencies. Answer the options in the frame of reference that the external agency HAS BEGUN TO EXERCISE MORE DIRECT CONTROL--BEYOND FISCAL CONTROL--OF YOUR INSTITUTION. For each decision area listed below, indicate whether you think wise decisions for your institution could be made by the external agency. (Check ONE box for each option)

	EXTERNAL AGENCY COULD MAKE WISE DECISIONS		
DECISION AREAS	Definitely	Possibly	Definitely Not
a. Decisions about faculty tenure laws or policy	☐	☐	☐
b. Decisions about promotion or tenure of individual faculty members	☐	☐	☐
c. Decisions about selection of faculty members	☐	☐	☐
d. Decisions about selection of administrators	☐	☐	☐
e. Decisions about faculty salaries	☐	☐	☐
f. Decisions about academic freedom for faculty	☐	☐	☐
g. Decisions about academic freedom for students (e.g., right to redress for unfair grading practices)	☐	☐	☐
h. Decisions about the establishment of grading standards	☐	☐	☐
i. Decisions about faculty rights, privileges, and grievances (e.g., right to hearing for non-tenured faculty not reappointed)	☐	☐	☐
j. Decisions about criteria for evaluating faculty performance	☐	☐	☐
k. Decisions about criteria for evaluating curricula	☐	☐	☐
l. Decisions about teaching load (e.g., required credit hours)	☐	☐	☐
m. Decisions about other faculty responsibilities (e.g., research)	☐	☐	☐
n. Decisions about faculty discipline	☐	☐	☐

(Items 12-15) How would you evaluate your own performance on the following items?

	POOR									EXCELLENT
	(Circle ONE numeral for each item)									
12. Teaching	1	2	3	4	5	6	7	8	9	10
13. Research	1	2	3	4	5	6	7	8	9	10
14. Service	1	2	3	4	5	6	7	8	9	10
15. Administration	1	2	3	4	5	6	7	8	9	10

16. One model of "accountability" which has been suggested for faculty members is that of (1) having each institution establish and use rigorous criteria for judging the performance of individual professors and instructors, and (2) having the results of those judgments passed on to external agencies (e.g., legislative sub-committee on higher education) for final personnel decisions such as promotion, retention, and salary increases. ASSUMING that such a system were in use in your institution and ASSUMING that tenure had been revoked by the external agency to which you are responsible, which of the following criteria would be acceptable to you for use by your department or institution as a basis for providing a rating of your performance to the external agency? (Check ANY box that would be acceptable to you)

☐ Number of courses or credit hours of courses taught
☐ Advising load
☐ Number of speeches, papers, or training sessions conducted outside your institution
☐ Number of publications you have produced
☐ Percentage of your publications which have appeared in refereed journals or books
☐ Number of research or development contracts or grants you have received from funding agencies
☐ Students' overall ratings of your performance on some numeric scale
☐ Administrators' overall ratings of your performance on some numeric scale
☐ Faculty members' overall ratings of your performance on some numeric scale
☐ Other (please specify) ______________________________

17. How many publications (e.g., journal articles, books) have you produced since receipt of your highest degree? ________

18. How many of these publications have been in refereed journals or books (where decision about acceptance for publication was made by advisory panels, editorial consultants, or commercial publishers)? ________

19. What average rating do you think your students would give to you as a teacher on a 10-point scale where poor is rated "1" and excellent is rated "10?" (If you are an administrator, answer in terms of how you think your faculty members would rate you as an administrator.) ________

20. If such a scale were provided to you, would you be willing to administer it to your students (faculty members, if you are an administrator) and send the ratings to us as a check on the accuracy of your perceptions? ☐ Yes ☐ No

A NATIONAL STUDY OF FACULTY VIEWS ON CONTROL OF HIGHER EDUCATION

Please provide the following information: 1. ____________ Highest earned degree ______ Year of degree ____________ Major ____________ Institution

2. ______ Sex

3. ____________ Present academic rank

4. ____________ If an administrator, title of present position

5. ____________ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology")

6. ____________ Highest degree offered at your institution in area you identified in item 5

7. Do you hold tenure in your present institution? ______

DIRECTIONS: The summarized responses to this questionnaire may be used as the basis for recommendations to state legislatures and to bodies which have similar responsibilities for private institutions of higher education. Therefore, please answer each question carefully and frankly, using the following definitions.

"INSTITUTION" refers to any university or 4-year college. "DEPARTMENT" refers to the smallest institutional unit (e.g., college, school, or division) with budgetary autonomy. "ADMINISTRATOR" refers to anyone who administers a department (as defined above) or any larger unit, including the entire institution. "EXTERNAL AGENCY" refers to a state legislature, a church governing board, or any other external agency to which an institution of higher education may be responsible, fiscally or otherwise.

8. In answering this item, assume that the present trend toward external control of institutions of higher education has become a reality for your institution. Assume that there is no longer a question of IF there will be greater outside control of your institution but only of WHAT specifically will be controlled by external agencies. Answer the options in the frame of reference that the external agency HAS BEGUN TO EXERCISE MORE DIRECT CONTROL--BEYOND FISCAL CONTROL--OF YOUR INSTITUTION. For each decision area listed below, indicate whether you think wise decisions for your institution could be made by the external agency. (Check ONE box for each option)

	EXTERNAL AGENCY COULD MAKE WISE DECISIONS		
DECISION AREAS	Definitely	Possibly	Definitely Not
a. Decisions about faculty tenure laws or policy	☐	☐	☐
b. Decisions about promotion or tenure of individual faculty members	☐	☐	☐
c. Decisions about selection of faculty members	☐	☐	☐
d. Decisions about selection of administrators	☐	☐	☐
e. Decisions about faculty salaries	☐	☐	☐
f. Decisions about academic freedom for faculty	☐	☐	☐
g. Decisions about academic freedom for students (e.g., right to redress for unfair grading practices)	☐	☐	☐
h. Decisions about the establishment of grading standards	☐	☐	☐
i. Decisions about faculty rights, privileges, and grievances (e.g., right to hearing for non-tenured faculty not reappointed)	☐	☐	☐
j. Decisions about criteria for evaluating faculty performance	☐	☐	☐
k. Decisions about criteria for evaluating curricula	☐	☐	☐
l. Decisions about teaching load (e.g., required credit hours)	☐	☐	☐
m. Decisions about other faculty responsibilities (e.g., research)	☐	☐	☐
n. Decisions about faculty discipline	☐	☐	☐

9. Legislatures in some states (e.g., California, Michigan, New York, Ohio) have recently introduced or passed legislation stipulating classroom contact hours for each professor or advocating abolishment of faculty tenure. Several other incidences of restrictive legislation or policy have occurred in 1970 and 1971 in other areas of the country, in both private and public institutions. A list of suggested or approved proposals appears below. Please indicate how tolerable each of these proposals would be to you if applied to your institution. (Check ONE box for each proposal)

	AT MY INSTITUTION, PROPOSAL WOULD BE		
PROPOSALS	Quite Tolerable	Barely Tolerable	Absolutely Intolerable
a. Faculty members in universities will teach 12 classroom hours; faculty members in 4-year colleges will teach 15 classroom hours; those faculty members teaching less than the required load will have their salaries reduced proportionately	☐	☐	☐
b. Faculty tenure will be abolished and replaced with a system of merit pay which provides incentives for quality teaching	☐	☐	☐
c. Salaries of faculty members convicted on charges of campus disruption will be withheld or curtailed	☐	☐	☐

Highest degree offered at your institution in area you identified in item 5 ____

7. Do you hold tenure in your present institution? ____

DIRECTIONS: The summarized responses to this questionnaire may be used as the basis for recommendations to state legislatures and to bodies which have similar responsibilities for private institutions of higher education. Therefore, please answer each question carefully and frankly, using the following definitions.

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8. In answering this item, assume that the present trend toward external control of institutions of higher education has become a reality for your institution. Assume that there is no longer a question of IF there will be greater outside control of your institution but only of WHAT specifically will be controlled by external agencies. Answer the options in the frame of reference that the external agency HAS BEGUN TO EXERCISE MORE DIRECT CONTROL--BEYOND FISCAL CONTROL--OF YOUR INSTITUTION. For each decision area listed below, indicate whether you think wise decisions for your institution could be made by the external agency. (Check ONE box for each option)

	EXTERNAL AGENCY COULD MAKE WISE DECISIONS		
DECISION AREAS	Definitely	Possibly	Definitely Not
a. Decisions about faculty tenure laws or policy	☐	☐	☐
b. Decisions about promotion or tenure of individual faculty members	☐	☐	☐
c. Decisions about selection of faculty members	☐	☐	☐
d. Decisions about selection of administrators	☐	☐	☐
e. Decisions about faculty salaries	☐	☐	☐
f. Decisions about academic freedom for faculty	☐	☐	☐
g. Decisions about academic freedom for students (e.g., right to redress for unfair grading practices)	☐	☐	☐
h. Decisions about the establishment of grading standards	☐	☐	☐
i. Decisions about faculty rights, privileges, and grievances (e.g., right to hearing for non-tenured faculty not reappointed)	☐	☐	☐
j. Decisions about criteria for evaluating faculty performance	☐	☐	☐
k. Decisions about criteria for evaluating curricula	☐	☐	☐
l. Decisions about teaching load (e.g., required credit hours)	☐	☐	☐
m. Decisions about other faculty responsibilities (e.g., research)	☐	☐	☐
n. Decisions about faculty discipline	☐	☐	☐

9. Legislatures in some states (e.g., California, Michigan, New York, Ohio) have recently introduced or passed legislation stipulating classroom contact hours for each professor or advocating abolishment of faculty tenure. Several other incidences of restrictive legislation or policy have occurred in 1970 and 1971 in other areas of the country, in both private and public institutions. A list of suggested or approved proposals appears below. Please indicate how tolerable each of these proposals would be to you if applied to your institution. (Check ONE box for each proposal)

	AT MY INSTITUTION, PROPOSAL WOULD BE		
PROPOSALS	Quite Tolerable	Barely Tolerable	Absolutely Intolerable
a. Faculty members in universities will teach 12 classroom hours; faculty members in 4-year colleges will teach 15 classroom hours; those faculty members teaching less than the required load will have their salaries reduced proportionately	☐	☐	☐
b. Faculty tenure will be abolished and replaced with a system of merit pay which provides incentives for quality teaching	☐	☐	☐
c. Salaries of faculty members convicted on charges of campus disruption will be withheld or curtailed	☐	☐	☐
d. Regulations governing campus conduct and penalties for violating these rules will be submitted to the external agency for approval	☐	☐	☐
e. The external agency will establish special procedures for suspension and dismissal of students and/or faculty members	☐	☐	☐
f. Faculty members will be required to rebate to their employing institution a portion of any money from book royalties, consultancies, etc., earned during the period of employ with that institution	☐	☐	☐

(Items 10-13) How would you evaluate your own performance on the following items?

	POOR				(Circle ONE numeral for each item)					EXCELLENT
10. Teaching	1	2	3	4	5	6	7	8	9	10
11. Research	1	2	3	4	5	6	7	8	9	10
12. Service	1	2	3	4	5	6	7	8	9	10
13. Administration	1	2	3	4	5	6	7	8	9	10

14. One model of "accountability" which has been suggested for faculty members is that of (1) having each institution establish and use rigorous criteria for judging the performance of individual professors and instructors, and (2) having the results of those judgments passed on to external agencies (e.g., legislative sub-committee on higher education) for final personnel decisions such as promotion, retention, and salary increases. ASSUMING that such a system were in use in your institution and ASSUMING that tenure had been revoked by the external agency to which you are responsible, which of the following criteria would be acceptable to you for use by your department or institution as a basis for providing a rating of your performance to the external agency? (Check ANY box that would be acceptable to you)

☐ Number of courses or credit hours of courses taught

☐ Advising load

☐ Number of speeches, papers, or training sessions conducted outside your institution

☐ Number of publications you have produced

☐ Percentage of your publications which have appeared in refereed journals or books

☐ Number of research or development contracts or grants you have received from funding agencies

☐ Students' overall ratings of your performance on some numeric scale

☐ Administrators' overall ratings of your performance on some numeric scale

☐ Faculty members' overall ratings of your performance on some numeric scale

☐ Other (please specify) ______________________________

15. What is the current expectation your institution holds for you in relation to publication? (Check ANY that apply)

☐ Publication is necessary for promotion in rank

☐ Publication is necessary for increases in salary

☐ Publication is necessary for retention in my position

☐ Publication is not expected of me, although it is viewed as desirable

☐ The issue has not been raised in my institution

16. How many publications (e.g., journal articles, books) have you produced since receipt of your highest degree? ______

17. How many of these publications have been in refereed journals or books (where decision about acceptance for publication was made by advisory panels, editorial consultants, or commercial publishers)? ______

18. What average rating do you think your students would give to you as a teacher on a 10-point scale where poor is rated "1" and excellent is rated "10?" (If you are an administrator, answer in terms of how you think your faculty members would rate you as an administrator.) ______

19. If such a scale were provided to you, would you be willing to administer it to your students (faculty members, if you are an administrator) and send the ratings to us as a check on the accuracy of your perceptions? ☐ Yes ☐ No

(Items 20-40) Some persons have predicted that increased external control of higher education would be so repugnant to higher education personnel as to result in significant numbers of college and university faculty and administrators leaving higher education to pursue careers in business, industry, or private consulting activities. We would like to determine what type of changes in your institution would cause you to consider leaving either your present position to move to another institution or to pursue a career outside higher education. In answering the items below, please consider each one separately and assume that all other conditions of your employment remained the same.

WOULD YOU ATTEMPT TO LEAVE YOUR PRESENT POSITION IF:

20. Your teaching load were set at 12 credit hours per quarter or semester? ☐ Yes ☐ No

21. Your teaching load were set at 15 credit hours per quarter or semester? ☐ Yes ☐ No

22. Minimum enrollment in all your classes were increased to 100 students? ☐ Yes ☐ No

23. All of your teaching load were at the lower division level (freshman and sophomore)? ☐ Yes ☐ No

24. You received no load credit for supervision of independent study, honors papers, theses, or dissertations? ☐ Yes ☐ No

25. You received no opportunity for summer teaching? ☐ Yes ☐ No

26. The assistants you now have in teaching (e.g., TAs, paper readers) were eliminated? ☐ Yes ☐ No

27. Admissions standards were lowered significantly? ☐ Yes ☐ No

28. You were required to serve in each academic rank 5 years before being promoted to the next rank (assuming you met other criteria)? ☐ Yes ☐ No

29. Tenure were reviewed at 5-year intervals, with the possibility that it could be revoked upon review? ☐ Yes ☐ No

30. Tenure were abolished completely? ☐ Yes ☐ No

31. Some non-tenured faculty were terminated and their positions filled with minority persons to create racial or sex balance in the total faculty? ☐ Yes ☐ No

32. The "publish or perish" idea became the major criterion in your promotion or retention? ☐ Yes ☐ No

☐ Number of speeches, papers, or training sessions conducted outside your institution

☐ Number of publications you have produced

☐ Percentage of your publications which have appeared in refereed journals or books

scale

☐ Administrators' overall ratings of your performance on some numeric scale

☐ Faculty members' overall ratings of your performance on some numeric scale

☐ Other (please specify) ______________________________

15. What is the current expectation your institution holds for you in relation to publication? (Check ANY that apply)
    - ☐ Publication is necessary for promotion in rank
    - ☐ Publication is necessary for increases in salary
    - ☐ Publication is necessary for retention in my position
    - ☐ Publication is not expected of me, although it is viewed as desirable
    - ☐ The issue has not been raised in my institution

16. How many publications (e.g., journal articles, books) have you produced since receipt of your highest degree? ________

17. How many of these publications have been in refereed journals or books (where decision about acceptance for publication was made by advisory panels, editorial consultants, or commercial publishers)? ________

18. What average rating do you think your students would give to you as a teacher on a 10-point scale where poor is rated "1" and excellent is rated "10?" (If you are an administrator, answer in terms of how you think your faculty members would rate you as an administrator.) ________

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21. Your teaching load were set at 15 credit hours per quarter or semester? ☐ Yes ☐ No
22. Minimum enrollment in all your classes were increased to 100 students? ☐ Yes ☐ No
23. All of your teaching load were at the lower division level (freshman and sophomore)? ☐ Yes ☐ No
24. You received no load credit for supervision of independent study, honors papers, theses, or dissertations? ☐ Yes ☐ No
25. You received no opportunity for summer teaching? ☐ Yes ☐ No
26. The assistants you now have in teaching (e.g., TAs, paper readers) were eliminated? ☐ Yes ☐ No
27. Admissions standards were lowered significantly? ☐ Yes ☐ No
28. You were required to serve in each academic rank 5 years before being promoted to the next rank (assuming you met other criteria)? ☐ Yes ☐ No
29. Tenure were reviewed at 5-year intervals, with the possibility that it could be revoked upon review? ☐ Yes ☐ No
30. Tenure were abolished completely? ☐ Yes ☐ No
31. Some non-tenured faculty were terminated and their positions filled with minority persons to create racial or sex balance in the total faculty? ☐ Yes ☐ No
32. The "publish or perish" idea became the major criterion in your promotion or retention? ☐ Yes ☐ No
33. Your academic freedom were restricted (e.g., by having observers from external agency in your class)? ☐ Yes ☐ No
34. You were forced to share office space? ☐ Yes ☐ No
35. Money for travel and long distance telephone calls were eliminated? ☐ Yes ☐ No
36. Your fringe benefits (e.g., insurance, retirement) were reduced by 50%? ☐ Yes ☐ No
37. Your salary were reduced by an amount no greater than 10% of your salary? ☐ Yes ☐ No
38. Your salary were reduced by an amount greater than 10% of your salary? ☐ Yes ☐ No
39. Your annual salary increase were less than the annual increase in the "cost of living index?" ☐ Yes ☐ No
40. Your salary remained the same (i.e., no "cost of living" increase) for 3 consecutive years? ☐ Yes ☐ No

A NATIONAL STUDY OF FACULTY VIEWS ON CONTROL OF HIGHER EDUCATION

Please provide the following information: 1. ____________ Highest earned degree 2. ________ Year of degree

3. ____________ Major 4. ____________ Degree-granting institution 5. ______ Sex

6. ____________ Present academic rank 7. ____________ If an administrator, title of present position

8. ____________ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology")

9. ____________ Highest degree offered at your institution in area you identified in item 8

10. Do you hold tenure in your present institution? ______

DIRECTIONS: The summarized responses to this questionnaire may be used as the basis for recommendations to state legislatures and to bodies which have similar responsibilities for private institutions of higher education. Therefore, please answer each question carefully and frankly, using the following definitions.

"INSTITUTION" refers to *any* university or 4-year college. "DEPARTMENT" refers to the smallest institutional unit (e.g., college, school, or division) *with budgetary autonomy*. "ADMINISTRATOR" refers to anyone who administers a department (as defined above) or any larger unit, including the entire institution. "EXTERNAL AGENCY" refers to a state legislature, a church governing board, or any other external agency to which an institution of higher education may be responsible, fiscally or otherwise.

11. In answering this item, assume that the present trend toward external control of institutions of higher education has become a reality for your institution. Assume that there is no longer a question of IF there will be greater outside control of your institution but only of WHAT specifically will be controlled by external agencies. Answer the options in the frame of reference that the external agency HAS BEGUN TO EXERCISE MORE DIRECT CONTROL--BEYOND FISCAL CONTROL--OF YOUR INSTITUTION. For each *decision area* listed below, indicate whether you think wise decisions *for your institution* could be made by the external agency. (Check ONE box for each option)

	EXTERNAL AGENCY COULD MAKE WISE DECISIONS		
DECISION AREAS	Definitely	Possibly	Definitely Not
a. Decisions about faculty tenure laws or policy	☐	☐	☐
b. Decisions about promotion or tenure of individual faculty members	☐	☐	☐
c. Decisions about selection of faculty members	☐	☐	☐
d. Decisions about selection of administrators	☐	☐	☐
e. Decisions about faculty salaries	☐	☐	☐
f. Decisions about academic freedom for faculty	☐	☐	☐
g. Decisions about academic freedom for students (e.g., right to redress for unfair grading practices)	☐	☐	☐
h. Decisions about the establishment of grading standards	☐	☐	☐
i. Decisions about faculty rights, privileges, and grievances (e.g., right to hearing for non-tenured faculty not reappointed)	☐	☐	☐

(Item 11 continued)

	EXTERNAL AGENCY COULD MAKE WISE DECISIONS		
	Definitely	Possibly	Definitely Not
j. Decisions about criteria for evaluating faculty performance	☐	☐	☐
k. Decisions about criteria for evaluating curricula	☐	☐	☐
l. Decisions about teaching load (e.g, required credit hours)	☐	☐	☐
m. Decisions about other faculty responsibilities (e.g., research)	☐	☐	☐
n. Decisions about faculty discipline	☐	☐	☐

(Items 12-15) How would you evaluate your own performance on the following items?

	POOR									EXCELLENT
	(Circle ONE numeral for each item)									
12. Teaching	1	2	3	4	5	6	7	8	9	10
13. Research	1	2	3	4	5	6	7	8	9	10
14. Service	1	2	3	4	5	6	7	8	9	10
15. Administration	1	2	3	4	5	6	7	8	9	10

16. One model of "accountability" which has been suggested for faculty members is that of (1) having each institution establish and use rigorous criteria for judging the performance of individual professors and instructors, and (2) having the results of those judgments passed on to external agencies (e.g., legislative sub-committee on higher education) for final personnel decisions such as promotion, retention, and salary increases. ASSUMING that such a system were in use in your institution and ASSUMING that tenure had been revoked by the external agency to which you are responsible, which of the following criteria would be acceptable to you for use by your department or institution as a basis for providing a rating of your own performance to the external agency? (Check ANY box that would be acceptable to you)

☐ Number of courses or credit hours of courses taught

☐ Advising load

☐ Number of speeches, papers, or training sessions conducted outside your institution

☐ Number of publications you have produced

☐ Percentage of your publications which have appeared in refereed journals or books

☐ Number of research or development contracts or grants you have received from funding agencies

☐ Students' overall ratings of your performance on some numeric scale

☐ Administrators' overall ratings of your performance on some numeric scale

☐ Faculty members' overall ratings of your performance on some numeric scale

☐ Other (please specify) ____________________

17. How many publications (e.g., journal articles, books) have you produced since receipt of your highest degree? __________

18. How many of these publications have been in refereed journals or books (where decision about acceptance for publication was made by advisory panels, editorial consultants, or commercial publishers)? ________

19. What average rating do you think your students would give to you as a teacher on a 10-point scale where poor is rated "1" and excellent is rated "10?" (If you are an administrator, answer in terms of how you think your faculty members would rate you as an administrator.) ________

20. If such a scale were provided to you, would you be willing to administer it to your students (faculty members, if you are an administrator) and send the ratings to us as a check on the accuracy of your perceptions? ☐ Yes ☐ No

A NATIONAL STUDY OF FACULTY VIEWS ON CONTROL OF HIGHER EDUCATION

Please provide the following information: 1. ______ Highest earned degree ______ Year of degree ______ Major ______

______ Degree-granting institution

2. ______ Sex

3. ______ Present academic rank

4. ______ If an administrator, title of present position

5. ______ Present major area of teaching or professional identification (use general categories--e.g., "psychology," not "social psychology")

6. ______ Highest degree offered at your institution in area you identified in item 5

7. Do you hold tenure in your present institution? ______

DIRECTIONS: The summarized responses to this questionnaire may be used as the basis for recommendations to state legislatures and to bodies which have similar responsibilities for private institutions of higher education. Therefore, please answer each question carefully and frankly, using the following definitions.

"INSTITUTION" refers to any university or 4-year college. "DEPARTMENT" refers to the smallest institutional unit (e.g., college, school, or division) with budgetary autonomy. "ADMINISTRATOR" refers to anyone who administers a department (as defined above) or any larger unit, including the entire institution. "EXTERNAL AGENCY" refers to a state legislature, a church governing board, or any other external agency to which an institution of higher education may be responsible, fiscally or otherwise.

8. In answering this item, assume that the present trend toward external control of institutions of higher education has become a reality for your institution. Assume that there is no longer a question of IF there will be greater outside control of your institution but only of WHAT specifically will be controlled by external agencies. Answer the options in the frame of reference that the external agency HAS BEGUN TO EXERCISE MORE DIRECT CONTROL--BEYOND FISCAL CONTROL--OF YOUR INSTITUTION. For each decision area listed below, indicate whether you think wise decisions for your institution could be made by the external agency. (Check ONE box for each option)

	EXTERNAL AGENCY COULD MAKE WISE DECISIONS		
DECISION AREAS	Definitely	Possibly	Definitely Not
a. Decisions about faculty tenure laws or policy	☐	☐	☐
b. Decisions about promotion or tenure of individual faculty members	☐	☐	☐
c. Decisions about selection of faculty members	☐	☐	☐
d. Decisions about selection of administrators	☐	☐	☐
e. Decisions about faculty salaries	☐	☐	☐
f. Decisions about academic freedom for faculty	☐	☐	☐
g. Decisions about academic freedom for students (e.g., right to redress for unfair grading practices)	☐	☐	☐
h. Decisions about the establishment of grading standards	☐	☐	☐
i. Decisions about faculty rights, privileges, and grievances (e.g., right to hearing for non-tenured faculty not reappointed)	☐	☐	☐
j. Decisions about criteria for evaluating faculty performance	☐	☐	☐
k. Decisions about criteria for evaluating curricula	☐	☐	☐
l. Decisions about teaching load (e.g., required credit hours)	☐	☐	☐
m. Decisions about other faculty responsibilities (e.g., research	☐	☐	☐
n. Decisions about faculty discipline	☐	☐	☐

9. Legislatures in some states (e.g., California, Michigan, New York, Ohio) have recently introduced or passed legislation stipulating classroom contact hours for each professor or advocating abolishment of faculty tenure. Several other incidences of restrictive legislation or policy have occurred in 1970 and 1971 in other areas of the country, in both private and public institutions. A list of suggested or approved proposals appears below. Please indicate how tolerable each of these proposals would be to you if applied to your institution. (Check ONE box for each proposal)

		AT MY INSTITUTION, PROPOSAL WOULD BE		
	PROPOSALS	Quite Tolerable	Barely Tolerable	Absolutely Intolerable
a.	Faculty members in universities will teach 12 classroom hours; faculty members in 4-year colleges will teach 15 classroom hours; those faculty members teaching less than the required load will have their salaries reduced proportionately	☐	☐	☐
b.	Faculty tenure will be abolished and replaced with a system of merit pay which provides incentives for quality teaching	☐	☐	☐
c.	Salaries of faculty members convicted on charges of campus disruption will be withheld or curtailed	☐	☐	☐
d.	Regulations governing campus conduct and penalties for violating these rules will be submitted to the external agency for approval	☐	☐	☐
e.	The external agency will establish special procedures for suspension and dismissal of students and/or faculty members	☐	☐	☐
f.	Faculty members will be required to rebate to their employing institution a portion of any money from book royalties, consultancies, etc., earned during the period of employ with that institution	☐	☐	☐

(Items 10-13) How would you evaluate your own performance on the following items?

	POOR				(Circle ONE numeral for each item)					EXCELLENT
10. Teaching	1	2	3	4	5	6	7	8	9	10
11. Research	1	2	3	4	5	6	7	8	9	10
12. Service	1	2	3	4	5	6	7	8	9	10
13. Administration	1	2	3	4	5	6	7	8	9	10

14. One model of "accountability" which has been suggested for faculty members is that of (1) having each institution establish and use rigorous criteria for judging the performance of individual professors and instructors, and (2) having the results of those judgments passed on to external agencies (e.g., legislative sub-committee on higher education) for final personnel decisions such as promotion, retention, and salary increases. ASSUMING that such a system were in use in your institution and ASSUMING that tenure had been revoked by the external agency to which you are responsible, which of the following criteria would be acceptable to you for use by your department or institution as a basis for providing a rating of your performance to the external agency? (Check ANY box that would be acceptable to you)

☐ Number of courses or credit hours of courses taught

☐ Advising load

☐ Number of speeches, papers, or training sessions conducted outside your institution

☐ Number of publications you have produced

☐ Percentage of your publications which have appeared in refereed journals or books

☐ Number of research or development contracts or grants you have received from funding agencies

☐ Students' overall ratings of your performance on some numeric scale

☐ Administrators' overall ratings of your performance on some numeric scale

☐ Faculty members' overall ratings of your performance on some numeric scale

☐ Other (please specify) ______________________

15. What is the current expectation your institution holds for you in relation to publication? (Check ANY that apply)

☐ Publication is necessary for promotion in rank

☐ Publication is necessary for retention in my position

☐ The issue has not been raised in my institution

☐ Publication is necessary for increases in salary

☐ Publication is not expected of me, although it is viewed as desirable

16. How many publications (e.g., journal articles, books) have you produced since receipt of your highest degree? ________

17. How many of these publications have been in refereed journals or books (where decision about acceptance for publication was made by advisory panels, editorial consultants, or commercial publishers)? ________

18. What average rating do you think your students would give to you as a teacher on a 10-point scale where poor is rated "1" and excellent is rated "10?" (If you are an administrator, answer in terms of how you think your faculty members would rate you as an administrator.) ________

19. If such a scale were provided to you, would you be willing to administer it to your students (faculty members, if you are an administrator) and send the ratings to us as a check on the accuracy of your perceptions? ☐ Yes ☐ No

(Items 20-40) Some persons have predicted that increased external control of higher education would be so repugnant to higher education personnel as to result in significant numbers of college and university faculty and administrators leaving higher education to pursue careers in business, industry, or private consulting activities. We would like to determine what type of changes in your institution would cause you to consider leaving either your present position to move to another institution or to pursue a career outside higher education. In answering the items below, please consider each one separately and assume that all other conditions of your employment remained the same.

WOULD YOU ATTEMPT TO LEAVE YOUR PRESENT POSITION IF:

20. Your teaching load were set at 12 credit hours per quarter or semester? ☐ Yes ☐ No

21. Your teaching load were set at 15 credit hours per quarter or semester? ☐ Yes ☐ No

22. Minimum enrollment in all your classes were increased to 100 students? ☐ Yes ☐ No

23. All of your teaching load were at the lower division level (freshman and sophomore)? ☐ Yes ☐ No

24. You received no load credit for supervision of independent study, honors papers, theses, or disserations? ☐ Yes ☐ No

25. You received no opportunity for summer teaching? ☐ Yes ☐ No

26. The assistants you now have in teaching (e.g., TAs, paper readers) were eliminated? ☐ Yes ☐ No

27. Admissions standards were lowered significantly? ☐ Yes ☐ No

28. You were required to serve in each academic rank 5 years before being promoted to the next rank (assuming you met other criteria)? ☐ Yes ☐ No

29. Tenure were reviewed at 5-year intervals, with the possibility that it could be revoked upon review? ☐ Yes ☐ No

30. Tenure were abolished completely? ☐ Yes ☐ No

31. Some non-tenured faculty were terminated and their positions filled with minority persons to create racial or sex balance in the total faculty? ☐ Yes ☐ No

32. The "publish or perish" idea became the major criterion in your promotion or retention? ☐ Yes ☐ No

33. Your academic freedom were restricted (e.g., by having observers from external agency in your class)? ☐ Yes ☐ No

34. You were forced to share office space? ☐ Yes ☐ No

35. Money for travel and long distance telephone calls were eliminated? ☐ Yes ☐ No

36. Your fringe benefits (e.g., insurance, retirement) were reduced by 50%? ☐ Yes ☐ No

37. Your salary were reduced by an amount no greater than 10% of your salary? ☐ Yes ☐ No

38. Your salary were reduced by an amount greater than 10% of your salary? ☐ Yes ☐ No

39. Your annual salary increase were less than the annual increase in the "cost of living index?" ☐ Yes ☐ No

40. Your salary remained the same (i.e., no "cost of living" increase) for 3 consecutive years? ☐ Yes ☐ No

Appendix B

Cover Letters Used in Initial Mailing

role of higher education
professional appeal
anonymous

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

LABORATORY OF EDUCATIONAL RESEARCH

March 31, 1972

Dear Colleague:

American higher education is presently facing serious crises which will necessitate sweeping redefinition of the role of colleges and universities in the 1970s. The views of faculty members about future directions and content of institutions of higher education represent valuable input to the process of reconceptualizing roles for colleges and universities. In order to extend the knowledge in this important area, our Laboratory of Educational Research is conducting a U. S. Office of Education-sponsored study of professors' views of directions and content in American higher education.

You have been selected for this study as part of a nationwide random sample of college and university faculty members. By filling out and returning the enclosed questionnaire, you will be contributing to a better understanding of faculty opinion on the role of American higher education. If higher education is to attain its proper place in today's society, knowledge of the opinions of that important segment of the educational community is vital.

To assure your anonymity, no name is required on the questionnaire. All responses will be reported by group statistics only.

Please take a few minutes to fill out and return the questionnaire as soon as you can. To help speed your response, many of the questions have been designed to be answered by simple check marks. I know your time is limited but feel this study will be useful to future understanding and development in the field of higher education. I hope you will help in this endeavor.

Please return the questionnaire in the envelope which has been provided for your convenience. Your response will be appreciated.

Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Enclosure

BRW/eb

role of higher education
professional appeal
nonanonymous

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BOULDER, COLORADO 80302

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role of higher education
personal appeal
anonymous

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BOULDER, COLORADO 80302

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March 31, 1972

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With support from the U. S. Office of Education, our Laboratory of Educational Research is conducting a study of the role of higher education in the United States in the 1970s. Specifically, we are studying the views of faculty members at colleges and universities about future directions and content of higher education. I have been asked to direct this study and, in order to complete it satisfactorily, I urgently need your assistance.

You have been selected for this study because your name was drawn as one of a nationwide random sample of college and university faculty members. Your response is most important to maintain the meaningfulness of the random sample. Even if the topic of the study is not particularly interesting to you, I hope you will realize how important your assistance is to me in completing this project.

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Enclosure

BRW/eb

governance of higher education
professional appeal
anonymous

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

LABORATORY OF EDUCATIONAL RESEARCH

March 31, 1972

Dear Colleague:

Recently, the organization and governance of institutions of higher education have been questioned by many elements of society. Questions have been raised about the relative influence which governing boards, administrators, faculty, students, and other groups should have in governance. The views of faculty members about this issue represent valuable input in determining optimal governance patterns for higher education. To extend the knowledge in this important area, our Laboratory of Educational Research is conducting a U. S. Office of Education-sponsored study of professors' views of how institutions of higher education should be governed.

You have been selected for this study as part of a nationwide random sample of college and university faculty members. By filling out and returning the enclosed questionnaire, you will be contributing to a better understanding of faculty opinion on governance in American higher education. If higher education is to attain its proper place in today's society, such information is vital.

To assure your anonymity, no name is required on the questionnaire. All responses will be reported by group statistics only.

Please take a few minutes to fill out and return the questionnaire as soon as you can. To help speed your response, many of the questions have been designed to be answered by simple check marks. I know your time is limited but feel this study will be useful to future development of effective governance structures in higher education. I hope you will help in this endeavor.

Please return the questionnaire in the envelope which has been provided for your convenience. Your response will be appreciated.

Sincerely,

Blaine R. Worthen

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governance of higher education
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governance of higher education
personal appeal
anonymous

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March 31, 1972

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With support from the U. S. Office of Education, our Laboratory of Educational Research is conducting a study of the organization and governance of institutions of higher education in the United States in the 1970s. Specifically, we are studying the views of faculty members at colleges and universities about how institutions of higher education should be governed in the future. I have been asked to direct this study and, in order to complete it satisfactorily, I urgently need your assistance.

You have been selected for this study because your name was drawn as one of a nationwide random sample of college and university faculty members. Your response is most important to maintain the meaningfulness of the random sample. Even if the topic of the study is not particularly interesting to you, I hope you will realize how important your assistance is to me in completing this project.

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BOULDER, COLORADO 80302

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governance of higher education
personal appeal
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March 31, 1972

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Enclosure

BRW/eb

control of higher education
professional appeal
anonymous

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

LABORATORY OF EDUCATIONAL RESEARCH

March 31, 1972

Dear Colleague:

Recently, many colleges and universities have been threatened by the increasing influence of external agencies. Legislatures and external governing boards have begun to exercise some measure of direct control (beyond fiscal appropriations) on the conduct of higher education programs. These trends have raised a number of questions about control of higher education. The views of faculty members about this issue represent valuable input in assessing the probable consequences of increased "outside control." To extend the knowledge in this important area, our Laboratory of Educational Research is conducting a U. S. Office of Education-sponsored study of professors' views on concerns related to the control of higher education.

You have been selected for this study as part of a nationwide random sample of college and university faculty members. By filling out and returning the enclosed questionnaire, you will be contributing to a better understanding of faculty opinion on control of higher education institutions. If higher education is to continue to develop under current societal pressures, such information is vital.

To assure your anonymity, no name is required on the questionnaire. All responses will be reported by group statistics only.

Please take a few minutes to fill out and return the questionnaire as soon as you can. To help speed your response, many of the questions have been designed to be answered by simple check marks. I know your time is limited but feel this study will be useful to future understanding of who should control various aspects of higher education. I hope you will help in this endeavor.

Please return the questionnaire in the envelope which has been provided for your convenience. Your response will be appreciated.

Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Enclosure

BRW/eb

control of higher education
professional appeal
nonanonymous

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

LABORATORY OF EDUCATIONAL RESEARCH

March 31, 1972

Dear Colleague:

Recently, many colleges and universities have been threatened by the increasing influence of external agencies. Legislatures and external governing boards have begun to exercise some measure of direct control (beyond fiscal appropriations) on the conduct of higher education programs. These trends have raised a number of questions about control of higher education. The views of faculty members about this issue represent valuable input in assessing the probable consequences of increased "outside control." To extend the knowledge in this important area, our Laboratory of Educational Research is conducting a U. S. Office of Education-sponsored study of professors' views on concerns related to the control of higher education.

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Your reply will be held in strict confidence and names will never be associated with any information on the questionnaire. All responses will be reported by group statistics only. Names are included on the questionnaires only for purposes of checking off responses and establishing sampling stability.

Please take a few minutes to fill out and return the questionnaire as soon as you can. To help speed your response, many of the questions have been designed to be answered by simple check marks. I know your time is limited but feel this study will be useful to future understanding of who should control various aspects of higher education. I hope you will help in this endeavor.

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Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Enclosure

BRW/eb

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

control of higher education
personal appeal
anonymous

LABORATORY OF EDUCATIONAL RESEARCH

March 31, 1972

Dear Colleague:

With support from the U. S. Office of Education, our Laboratory of Educational Research is conducting a study of the control of institutions of higher education in the United States in the 1970s. Specifically, we are studying the views of faculty members at colleges and universities about who should control various aspects of higher education in the future. I have been asked to direct this study and, in order to complete it satisfactorily, I urgently need your assistance.

You have been selected for this study because your name was drawn as one of a nationwide random sample of college and university faculty members. Your response is most important to maintain the meaningfulness of the random sample. Even if the topic of the study is not particularly interesting to you, I hope you will realize how important your assistance is to me in completing this project.

Please take a few minutes to fill out and return the enclosed questionnaire as soon as you can. To help speed your response, many of the questions have been designed to be answered by simple check marks. I know your time is limited, but your response is so important that I hope you will take the time necessary to help in this endeavor.

To assure your anonymity, no name is required on the questionnaire. All responses will be reported by group statistics only.

Please return the questionnaire in the envelope which has been provided for your convenience. I shall be grateful for your response.

Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Enclosure

BRW/eb

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

control of higher education
personal appeal
nonanonymous

ABORATORY OF EDUCATIONAL RESEARCH

March 31, 1972

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With support from the U. S. Office of Education, our Laboratory of Educational Research is conducting a study of the control of institutions of higher education in the United States in the 1970s. Specifically, we are studying the views of faculty members at colleges and universities about who should control various aspects of higher education in the future. I have been asked to direct this study and, in order to complete it satisfactorily, I urgently need your assistance.

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Please return the questionnaire in the envelope which has been provided for your convenience. I shall be grateful for your response.

Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Enclosure

BRW/eb

Appendix C

Follow-up Correspondence

First Follow-up
Follow-up Postcards

May 5, 1972

Dear Colleague:

Recently, a questionnaire was sent to you to collect data for a national study of faculty views on concerns in higher education. I regret having to bother you again, but to date your response has not been received. At this point, it appears that the validity of the study will be in serious jeopardy unless a much higher percentage of responses is received. I would like to again request that you complete and return the questionnaire which was sent to you earlier.

Your cooperation will be greatly appreciated.

Sincerely,
Blaine R. Worthen
Blaine R. Worthen
Associate Professor and
Project Director

Professional Appeal

May 5, 1972

Dear Colleague:

Recently, a questionnaire was sent to you to collect data for a national study of faculty views on concerns in higher education. I regret having to bother you again, but to date your response has not been received. At this point, it appears that I will be unable to complete the study successfully unless a much higher percentage of responses is received. I would like to again request that you complete and return the questionnaire which was sent to you earlier.

I will be grateful for your response.

Sincerely,
Blaine R. Worthen
Associate Professor and
Project Director

Personal Appeal

first follow-up
follow-up letter
professional appeal

UNIVERSITY OF COLORADO

BOULDER, COLORADO 80302

LABORATORY OF EDUCATIONAL RESEARCH

May 5, 1972

Dear Colleague:

Recently, a questionnaire was sent to you to collect data for a national study of faculty views on concerns in higher education. I regret having to bother you again, but to date your response has not been received. At this point, it appears that the validity of the study will be in serious jeopardy unless a much higher percentage of responses is received. I would like to again request that you complete and return the questionnaire; another copy is enclosed.

Your cooperation will be greatly appreciated.

Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Enclosure

BRW/eb

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

LABORATORY OF EDUCATIONAL RESEARCH

first follow-up
follow-up letter
personal appeal

May 5, 1972

Dear Colleague:

Recently, a questionnaire was sent to you to collect data for a national study of faculty views on concerns in higher education. I regret having to bother you again, but to date your response has not been received. At this point, it appears that I will be unable to complete the study successfully unless a much higher percentage of responses is received. I would like to again request that you complete and return the questionnaire; another copy is enclosed.

I will be grateful for your cooperation.

Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Enclosure

BRW/eb

Second Follow-up

June 8, 1972

Dear Colleague:

This is a last ditch effort -- I have no further follow-up harassment planned beyond this postcard. But please, if it is at all possible, would you take just a few minutes to complete and return the questionnaire on higher education concerns I sent to you in April. Your cooperation will be most appreciated.

Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Appendix D

Validity Checks Correspondence

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

interest level letter

LABORATORY OF EDUCATIONAL RESEARCH

August 10, 1972

Dear Colleague:

With support from the U. S. Office of Education, our Laboratory of Educational Research is conducting a study to determine the relative effectiveness of several commonly used variables on the return rate of mailed questionnaires in higher education. For example, an attempt will be made to determine whether factors such as the following affect return rates: (1) number of items in the questionnaire, (2) number of pages in the questionnaire, (3) return envelope stamped or not stamped, (4) whether or not anonymity of respondent is assured, (5) personally typed cover letter or form letter, (6) type of appeal used in the cover letter, and (7) perceived threat of the questionnaire to potential respondents.

Three different questionnaires have been constructed for this study, with the difference being the degree to which the content is viewed as threatening by the respondent. Two pilot tests have ascertained that the questionnaires in fact do differ on the level of perceived threat. A problem has arisen, however, and it is because of this problem that I am requesting your help.

The problem, stated simply, is that differences in response rate across the three questionnaires cannot be interpreted unequivocally. Our hypothesis has been that response rates would increase as the perceived threat of the questionnaire decreased -- i.e., the less threatening the questionnaire is to the respondents, the more often the questionnaire would be completed and returned. However, it dawned on me that this hypothesis could be tested only if the content of the three questionnaires was of equal (or nearly equal) interest to respondents. I am not sure that this is the case, and I would be grateful for your help in determining this empirically.

I have enclosed a copy of each of the three questionnaires with this letter. You will also find a return postcard enclosed. On the postcard you will see the title of each questionnaire, followed by the numbers 1 through 5. For each questionnaire, please circle one number in the rating scale. In this scale, "1" is considered "not very interesting" and "5" is considered "very interesting." For example, if you think the content of a particular questionnaire is moderately interesting, you would probably circle "3" on the rating scale.

I hope you will take the few minutes necessary to read through the questionnaires and rate each one on the return postcard. The validity of the entire study will be questionable without this important addition to the methodology, and your response is critical to the success of the study. Your earliest cooperation will be most appreciated.

Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Enclosures

BRW/eb

Interest Level

Return Postcard

Please rate how interesting you think the questionnaires are. Circle one number in the rating scale for each of the 3 questionnaires.

	Not very interesting				Very interesting
A National Study of Faculty Views on the Role of Higher Education	1	2	3	4	5
A National Study of Faculty Views on Governance of Higher Education	1	2	3	4	5
A National Study of Faculty Views on Control of Higher Education	1	2	3	4	5

UNIVERSITY OF COLORADO
BOULDER, COLORADO 80302

LABORATORY OF EDUCATIONAL RESEARCH

threat level letter

August 18, 1972

Dear Colleague:

With support from the U. S. Office of Education, our Laboratory of Educational Research is conducting a study to determine the relative effectiveness of several commonly used variables on the return rate of mailed questionnaires in higher education. For example, an attempt will be made to determine whether factors such as the following affect return rates: (1) number of items in the questionnaire, (2) number of pages in the questionnaire, (3) return envelope stamped or not stamped, (4) whether or not anonymity of respondent is assured, (5) personally typed cover letter or form letter, (6) type of appeal used in the cover letter, and (7) perceived threat of the questionnaire to potential respondents. It is in connection with this last variable that I request your help.

Three different questionnaires have been constructed for this study, with the difference being the degree to which the content is viewed as threatening by the respondent. Topics in higher education which are likely to differ in how threatening they are to college and university faculty members have been chosen as bases for the questionnaires.

Enough background -- on to the major point. I need your help in ascertaining the perceived threat level of each of the three questionnaires. Specifically, I would be very appreciative if you would read through the three enclosed questionnaires as if you were responding to them and then rate each questionnaire on the basis of how threatening you think it would be to MOST faculty members in colleges and universities across the country. Please note that I am not asking you to rate how threatening you perceive each questionnaire to be, but how much you think it would threaten most faculty members.

On the enclosed postcard, you will find the title of each questionnaire, followed by the numbers 1 through 5. For each questionnaire, please circle one number in the rating scale. In this scale, "1" is considered low threat and "5" is considered high threat. For example, if you think a particular questionnaire is likely to be viewed as moderately threatening by most faculty members across the country, you would probably circle "3" on the rating scale.

I hope you will take the few minutes necessary to read through the questionnaires and rate each one on the return postcard. Your response is critical to the success of the study. I will be grateful for your earliest cooperation.

Sincerely,

Blaine R. Worthen

Blaine R. Worthen
Associate Professor and
Project Director

Enclosures

BRW/eb

Threat Level

Return Postcard

Please rate how threatening you think the questionnaires would be to faculty members throughout the country. Circle one number in the rating scale for each of the questionnaires.

	Not very threatening				Very threatening
A National Study of Faculty Views on the Role of Higher Education	1	2	3	4	5
A National Study of Faculty Views on Governance of Higher Education	1	2	3	4	5
A National Study of Faculty Views on Control of Higher Education	1	2	3	4	5

Appendix E

Tables of Response Rates:
All Analyses

Guide to Interpretation of Tables E-1 - E-9

The tables on the following pages conform to the research design shown in Figure 1 in Chapter 3 of this report. Notation is used in the tables to identify the different levels of the variables. A description of the notations and what they represent is given below.

Stamp - stamped return envelope
No stamp - unstamped return envelope

1-20 - 1-page 20-item questionnaire
1-40 - 1-page 40-item questionnaire
3-20 - 3-page 20-item questionnaire
3-40 - 3-page 40-item questionnaire

A - anonymity of respondent assured
NA - anonymity of respondent not assured

Typed prof - typed cover letter with professional appeal
Typed pers - typed cover letter with personal appeal
Form prof - form cover letter with professional appeal
Form pers - form cover letter with personal appeal

No follow-up - no follow-up contact
Postcard - follow-up postcard
Letter - follow-up letter with another questionnaire enclosed

TABLE E-1

Response Rates for Analysis 1
Role of Higher Education

		Stamp								No stamp							
		1-20		1-40		3-20		3-40		1-20		1-40		3-20		3-40	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
No follow-up	Typed prof	50.0	12.5	37.5	37.5	37.5	25.0	50.0	62.5	75.0	37.5	50.0	62.5	25.0	62.5	50.0	37.5
	Typed pers	25.0	12.5	62.5	75.0	50.0	62.5	62.5	12.5	25.0	37.5	50.0	25.0	50.0	37.5	12.5	50.0
	Form prof	62.5	75.0	37.5	37.5	37.5	37.5	37.5	25.0	37.5	12.5	12.5	50.0	37.5	50.0	37.5	12.5
	Form pers	25.0	62.5	37.5	50.0	25.0	25.0	25.0	62.5	50.0	12.5	12.5	50.0	37.5	37.5	50.0	37.5
Postcard	Typed prof	50.0	37.5	25.0	25.0	37.5	37.5	50.0	25.0	25.0	12.5	12.5	12.5	25.0	37.5	50.0	75.0
	Typed pers	87.5	62.5	37.5	62.5	25.0	50.0	37.5	37.5	37.5	50.0	25.0	0.0	25.0	25.0	50.0	75.0
	Form prof	0.0	25.0	75.0	25.0	75.0	37.5	0.0	37.5	37.5	25.0	37.5	37.5	62.5	37.5	37.5	25.0
	Form pers	50.0	50.0	62.5	12.5	62.5	50.0	25.0	25.0	62.5	37.5	37.5	37.5	50.0	12.5	37.5	62.5
Letter	Typed prof	37.5	50.0	37.5	50.0	37.5	50.0	37.5	62.5	25.0	25.0	50.0	50.0	25.0	62.5	50.0	50.0
	Typed pers	12.5	50.0	37.5	62.5	62.5	62.5	12.5	50.0	50.0	62.5	25.0	12.5	12.5	12.5	25.0	37.5
	Form prof	12.5	37.5	12.5	87.5	12.5	25.0	37.5	0.0	12.5	37.5	25.0	37.5	62.5	37.5	62.5	37.5
	Form pers	62.5	37.5	25.0	37.5	37.5	75.0	62.5	37.5	37.5	37.5	37.5	25.0	25.0	37.5	37.5	50.0

TABLE E-2

Response Rates for Analysis 1
Governance of Higher Education

		Stamp								No stamp							
		1-20		1-40		3-20		3-40		1-20		1-40		3-20		3-40	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
No follow-up	Typed prof	25.0	37.5	25.0	25.0	37.5	50.0	37.5	12.5	62.5	37.5	50.0	37.5	25.0	50.0	50.0	12.5
	Typed pers	75.0	12.5	37.5	25.0	37.5	12.5	12.5	50.0	50.0	37.5	12.5	50.0	75.0	50.0	25.0	75.0
	Form prof	37.5	37.5	62.5	25.0	25.0	25.0	12.5	12.5	75.0	75.0	50.0	12.5	37.5	62.5	25.0	37.5
	Form pers	12.5	37.5	25.0	50.0	50.0	50.0	25.0	50.0	37.5	37.5	25.0	50.0	37.5	37.5	37.5	37.5
Postcard	Typed prof	50.0	50.0	25.0	37.5	50.0	25.0	25.0	12.5	62.5	37.5	37.5	37.5	50.0	25.0	25.0	37.5
	Typed pers	62.5	25.0	87.5	62.5	50.0	25.0	50.0	50.0	50.0	62.5	37.5	12.5	12.5	25.0	37.5	12.5
	Form prof	50.0	37.5	50.0	0.0	37.5	25.0	62.5	50.0	62.5	25.0	0.0	50.0	37.5	37.5	37.5	50.0
	Form pers	37.5	25.0	37.5	62.5	37.5	25.0	12.5	12.5	37.5	75.0	0.0	62.5	50.0	25.0	25.0	25.0
Letter	Typed prof	50.0	37.5	50.0	25.0	50.0	50.0	37.5	50.0	50.0	37.5	12.5	12.5	75.0	37.5	0.0	12.5
	Typed pers	75.0	62.5	25.0	87.5	50.0	50.0	50.0	62.5	25.0	62.5	12.5	50.0	37.5	37.5	50.0	37.5
	Form prof	25.0	25.0	12.5	25.0	12.5	25.0	25.0	37.5	62.5	25.0	25.0	25.0	37.5	50.0	25.0	50.0
	Form pers	25.0	12.5	25.0	37.5	25.0	12.5	25.0	25.0	75.0	37.5	12.5	50.0	62.5	50.0	0.0	37.5

TABLE E-3

Response Rates for Analysis 1
Control of Higher Education

		Stamp								No stamp							
		1-20		1-40		3-20		3-40		1-20		1-40		3-20		3-40	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
No follow-up	Typed prof	62.5	12.5	62.5	25.0	0.0	50.0	12.5	12.5	62.5	50.0	25.0	50.0	25.0	37.5	62.5	37.5
	Typed pers	37.5	75.0	37.5	50.0	62.5	25.0	12.5	25.0	37.5	25.0	62.5	50.0	37.5	37.5	50.0	25.0
	Form prof	37.5	62.5	62.5	0.0	25.0	50.0	25.0	50.0	12.5	37.5	62.5	25.0	62.5	25.0	50.0	25.0
	Form pers	50.0	37.5	0.0	37.5	75.0	50.0	37.5	25.0	37.5	62.5	12.5	25.0	50.0	12.5	25.0	62.5
Postcard	Typed prof	25.0	12.5	37.5	75.0	37.5	25.0	12.5	50.0	37.5	75.0	37.5	37.5	25.0	25.0	37.5	50.0
	Typed pers	37.5	62.5	37.5	62.5	37.5	75.0	50.0	37.5	12.5	37.5	37.5	37.5	12.5	50.0	37.5	37.5
	Form prof	50.0	50.0	50.0	37.5	25.0	50.0	62.5	37.5	37.5	25.0	37.5	37.5	25.0	37.5	37.5	12.5
	Form pers	50.0	75.0	37.5	25.0	25.0	37.5	12.5	50.0	37.5	25.0	25.0	25.0	25.0	25.0	50.0	37.5
Letter	Typed prof	25.0	37.5	62.5	12.5	25.0	37.5	37.5	25.0	37.5	37.5	25.0	37.5	37.5	12.5	25.0	12.5
	Typed pers	62.5	50.0	25.0	37.5	37.5	25.0	62.5	50.0	25.0	87.5	50.0	25.0	0.0	50.0	12.5	50.0
	Form prof	37.5	0.0	12.5	62.5	37.5	37.5	25.0	25.0	25.0	0.0	37.5	37.5	25.0	37.5	25.0	62.5
	Form pers	25.0	37.5	25.0	50.0	62.5	37.5	50.0	12.5	50.0	87.5	0.0	50.0	75.0	12.5	25.0	25.0

TABLE E-4

Response Rates for Analysis 2
Role of Higher Education

		Stamp								No stamp							
		1-20		1-40		3-20		3-40		1-20		1-40		3-20		3-40	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
No follow-up	Typed prof	62.5	12.5	50.0	37.5	37.5	25.0	50.0	62.5	75.0	37.5	62.5	62.5	25.0	62.5	50.0	50.0
	Typed pers	37.5	12.5	75.0	87.5	50.0	62.5	62.5	12.5	25.0	37.5	62.5	37.5	62.5	12.5	62.5	75.0
	Form prof	75.0	50.0	50.0	50.0	37.5	62.5	37.5	50.0	25.0	12.5	50.0	50.0	50.0	50.0	12.5	12.5
	Form pers	62.5	37.5	50.0	25.0	37.5	25.0	87.5	50.0	25.0	25.0	37.5	62.5	37.5	62.5	37.5	50.0
Postcard	Typed prof	62.5	50.0	25.0	25.0	50.0	37.5	50.0	37.5	25.0	12.5	12.5	25.0	37.5	37.5	62.5	87.5
	Typed pers	75.0	50.0	62.5	37.5	62.5	75.0	37.5	50.0	37.5	37.5	12.5	25.0	25.0	50.0	75.0	50.0
	Form prof	37.5	75.0	37.5	62.5	50.0	0.0	37.5	37.5	25.0	50.0	37.5	75.0	37.5	25.0	62.5	37.5
	Form pers	50.0	75.0	25.0	50.0	75.0	25.0	50.0	50.0	50.0	50.0	37.5	62.5	50.0	50.0	37.5	62.5
Letter	Typed prof	50.0	75.0	50.0	75.0	50.0	50.0	50.0	62.5	37.5	37.5	62.5	62.5	37.5	75.0	75.0	87.5
	Typed pers	62.5	37.5	87.5	62.5	75.0	37.5	50.0	62.5	62.5	50.0	25.0	37.5	25.0	50.0	50.0	62.5
	Form prof	37.5	25.0	75.0	12.5	37.5	50.0	25.0	50.0	37.5	25.0	75.0	62.5	50.0	75.0	50.0	37.5
	Form pers	75.0	75.0	50.0	50.0	75.0	87.5	50.0	50.0	87.5	50.0	37.5	37.5	25.0	37.5	50.0	37.5

TABLE E-5

Response Rates for Analysis 2
Governance of Higher Education

		Stamp								No stamp							
		1-20		1-40		3-20		3-40		1-20		1-40		3-20		3-40	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
No follow-up	Typed prof	50.0	25.0	25.0	25.0	62.5	37.5	25.0	37.5	62.5	50.0	37.5	37.5	37.5	87.5	12.5	37.5
	Typed pers	25.0	25.0	50.0	12.5	37.5	25.0	37.5	75.0	37.5	37.5	37.5	62.5	75.0	25.0	50.0	87.5
	Form prof	75.0	62.5	50.0	12.5	50.0	12.5	12.5	62.5	75.0	62.5	0.0	50.0	50.0	37.5	50.0	50.0
	Form pers	37.5	50.0	50.0	50.0	50.0	37.5	50.0	50.0	50.0	37.5	37.5	50.0	37.5	50.0	50.0	25.0
Postcard	Typed prof	50.0	37.5	25.0	62.5	37.5	37.5	25.0	50.0	62.5	12.5	62.5	50.0	50.0	12.5	62.5	50.0
	Typed pers	12.5	87.5	87.5	62.5	37.5	62.5	50.0	62.5	75.0	37.5	37.5	37.5	25.0	25.0	37.5	75.0
	Form prof	62.5	37.5	37.5	50.0	37.5	50.0	50.0	87.5	50.0	0.0	50.0	37.5	62.5	37.5	37.5	37.5
	Form pers	50.0	50.0	75.0	50.0	37.5	12.5	25.0	37.5	75.0	12.5	62.5	87.5	25.0	25.0	37.5	25.0
Letter	Typed prof	62.5	37.5	50.0	37.5	62.5	50.0	50.0	75.0	50.0	62.5	25.0	62.5	37.5	50.0	50.0	62.5
	Typed pers	62.5	25.0	87.5	75.0	50.0	50.0	62.5	50.0	62.5	50.0	50.0	50.0	37.5	50.0	62.5	50.0
	Form prof	62.5	50.0	12.5	50.0	50.0	37.5	62.5	62.5	62.5	25.0	37.5	37.5	50.0	50.0	75.0	12.5
	Form pers	50.0	12.5	62.5	62.5	25.0	37.5	50.0	75.0	62.5	25.0	50.0	50.0	75.0	25.0	50.0	37.5

TABLE E-6

Response Rates for Analysis 2
Control of Higher Education

		Stamp								No stamp							
		1-20		1-40		3-20		3-40		1-20		1-40		3-20		3-40	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
No follow-up	Typed prof	37.5	50.0	37.5	12.5	37.5	25.0	12.5	50.0	62.5	62.5	37.5	37.5	37.5	62.5	25.0	62.5
	Typed pers	25.0	75.0	50.0	37.5	25.0	12.5	50.0	37.5	50.0	75.0	50.0	37.5	37.5	50.0	25.0	50.0
	Form prof	62.5	12.5	12.5	37.5	37.5	37.5	25.0	25.0	62.5	37.5	25.0	75.0	37.5	25.0	37.5	62.5
	Form pers	25.0	37.5	50.0	50.0	62.5	37.5	37.5	50.0	37.5	25.0	50.0	25.0	12.5	62.5	50.0	62.5
Postcard	Typed prof	37.5	50.0	37.5	12.5	50.0	37.5	75.0	62.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	12.5
	Typed pers	62.5	50.0	62.5	75.0	62.5	37.5	50.0	25.0	62.5	37.5	25.0	25.0	37.5	50.0	62.5	37.5
	Form prof	50.0	37.5	62.5	37.5	62.5	75.0	62.5	37.5	25.0	50.0	25.0	37.5	62.5	50.0	50.0	25.0
	Form pers	50.0	37.5	37.5	25.0	62.5	37.5	50.0	25.0	50.0	50.0	25.0	62.5	37.5	37.5	37.5	37.5
Letter	Typed prof	50.0	75.0	25.0	50.0	62.5	50.0	62.5	50.0	50.0	37.5	75.0	25.0	37.5	25.0	37.5	62.5
	Typed pers	62.5	37.5	75.0	12.5	87.5	50.0	50.0	62.5	75.0	75.0	50.0	37.5	50.0	62.5	37.5	87.5
	Form prof	0.0	37.5	75.0	37.5	62.5	37.5	50.0	25.0	25.0	62.5	25.0	37.5	12.5	50.0	62.5	50.0
	Form pers	25.0	50.0	87.5	50.0	37.5	37.5	37.5	87.5	62.5	37.5	50.0	62.5	25.0	50.0	75.0	12.5

TABLE E-7

Response Rates for Analysis 3
Role of Higher Education

		Stamp								No stamp							
		1-20		1-40		3-20		3-40		1-20		1-40		3-20		3-40	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
No follow-up	Typed prof	62.5	12.5	50.0	62.5	50.0	25.0	50.0	62.5	75.0	37.5	62.5	62.5	25.0	62.5	50.0	50.0
	Typed pers	37.5	12.5	75.0	87.5	50.0	62.5	62.5	12.5	25.0	37.5	75.0	37.5	62.5	12.5	62.5	75.0
	Form prof	75.0	50.0	50.0	50.0	37.5	62.5	37.5	62.5	25.0	25.0	50.0	50.0	50.0	50.0	25.0	12.5
	Form pers	62.5	37.5	50.0	25.0	37.5	25.0	87.5	50.0	25.0	25.0	37.5	62.5	37.5	62.5	37.5	50.0
Postcard	Typed prof	62.5	50.0	25.0	25.0	62.5	37.5	50.0	37.5	25.0	12.5	12.5	25.0	37.5	37.5	62.5	100.0
	Typed pers	75.0	50.0	62.5	50.0	62.5	75.0	37.5	50.0	50.0	37.5	12.5	37.5	37.5	50.0	75.0	62.5
	Form prof	37.5	75.0	50.0	62.5	50.0	0.0	37.5	37.5	25.0	50.0	37.5	75.0	37.5	37.5	62.5	37.5
	Form pers	50.0	75.0	25.0	50.0	75.0	25.0	50.0	50.0	50.0	50.0	37.5	62.5	50.0	62.5	50.0	62.5
Letter	Typed prof	62.5	87.5	62.5	87.5	50.0	50.0	50.0	75.0	50.0	37.5	62.5	75.0	37.5	75.0	75.0	87.5
	Typed pers	87.5	37.5	87.5	62.5	75.0	50.0	50.0	62.5	62.5	50.0	37.5	50.0	25.0	50.0	62.5	62.5
	Form prof	37.5	37.5	75.0	37.5	62.5	50.0	25.0	50.0	37.5	25.0	75.0	62.5	62.5	75.0	50.0	37.5
	Form pers	75.0	75.0	62.5	50.0	75.0	87.5	50.0	50.0	87.5	50.0	37.5	37.5	37.5	37.5	62.5	37.5

TABLE E-8

Response Rates for Analysis 3
Governance of Higher Education

		Stamp								No stamp							
		1-20		1-40		3-20		3-40		1-20		1-40		3-20		3-40	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
No follow-up	Typed prof	50.0	25.0	25.0	25.0	62.5	37.5	37.5	37.5	62.5	50.0	37.5	37.5	37.5	87.5	12.5	37.5
	Typed pers	25.0	25.0	50.0	12.5	37.5	25.0	37.5	75.0	37.5	37.5	37.5	62.5	75.0	25.0	50.0	87.5
	Form prof	75.0	62.5	50.0	12.5	50.0	12.5	12.5	62.5	75.0	62.5	0.0	50.0	50.0	37.5	50.0	62.5
	Form pers	37.5	50.0	50.0	50.0	50.0	37.5	50.0	50.0	50.0	37.5	37.5	50.0	37.5	50.0	50.0	25.0
Postcard	Typed prof	75.0	37.5	25.0	62.5	37.5	37.5	25.0	50.0	75.0	12.5	62.5	62.5	62.5	12.5	62.5	50.0
	Typed pers	12.5	87.5	87.5	62.5	50.0	62.5	50.0	62.5	75.0	37.5	50.0	37.5	37.5	25.0	37.5	75.0
	Form prof	62.5	37.5	37.5	62.5	50.0	50.0	50.0	87.5	50.0	12.5	50.0	37.5	62.5	50.0	37.5	37.5
	Form pers	50.0	50.0	75.0	62.5	37.5	12.5	25.0	37.5	75.0	37.5	62.5	87.5	37.5	25.0	37.5	25.0
Letter	Typed prof	75.0	50.0	50.0	37.5	62.5	50.0	62.5	75.0	50.0	62.5	25.0	87.5	37.5	50.0	50.0	62.5
	Typed pers	75.0	37.5	87.5	87.5	50.0	75.0	62.5	62.5	62.5	62.5	50.0	50.0	37.5	75.0	62.5	50.0
	Form prof	62.5	50.0	12.5	50.0	50.0	37.5	62.5	62.5	62.5	37.5	37.5	50.0	50.0	62.5	75.0	12.5
	Form pers	62.5	25.0	62.5	75.0	37.5	37.5	50.0	87.5	75.0	25.0	50.0	50.0	75.0	25.0	62.5	50.0

TABLE E-9

Response Rates for Analysis 3
Control of Higher Education

		Stamp								No stamp							
		1-20		1-40		3-20		3-40		1-20		1-40		3-20		3-40	
		A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA	A	NA
No follow-up	Typed prof	37.5	50.0	37.5	12.5	37.5	25.0	12.5	50.0	62.5	62.5	37.5	37.5	37.5	62.5	25.0	62.5
	Typed pers	25.0	75.0	50.0	37.5	25.0	12.5	50.0	37.5	50.0	75.0	50.0	37.5	37.5	50.0	25.0	50.0
	Form prof	62.5	12.5	12.5	37.5	37.5	37.5	25.0	25.0	62.5	37.5	37.5	75.0	37.5	25.0	37.5	62.5
	Form pers	37.5	50.0	50.0	50.0	62.5	37.5	37.5	50.0	37.5	25.0	50.0	25.0	12.5	75.0	50.0	62.5
Postcard	Typed prof	50.0	37.5	37.5	25.0	50.0	37.5	75.0	62.5	37.5	37.5	37.5	37.5	37.5	50.0	37.5	25.0
	Typed pers	62.5	50.0	62.5	87.5	75.0	37.5	50.0	37.5	62.5	37.5	50.0	25.0	37.5	50.0	62.5	50.0
	Form prof	50.0	37.5	62.5	37.5	62.5	75.0	75.0	37.5	62.5	62.5	25.0	37.5	62.5	50.0	75.0	50.0
	Form pers	50.0	37.5	37.5	25.0	62.5	37.5	50.0	37.5	50.0	50.0	25.0	62.5	37.5	37.5	37.5	37.5
Letter	Typed prof	62.5	75.0	37.5	50.0	62.5	62.5	62.5	62.5	50.0	50.0	75.0	37.5	37.5	37.5	37.5	62.5
	Typed pers	62.5	50.0	87.5	12.5	87.5	75.0	50.0	62.5	75.0	75.0	50.0	37.5	50.0	62.5	37.5	87.5
	Form prof	0.0	37.5	75.0	37.5	75.0	50.0	62.5	37.5	50.0	75.0	25.0	50.0	25.0	62.5	62.5	50.0
	Form pers	25.0	50.0	87.5	50.0	50.0	37.5	37.5	87.5	87.5	50.0	50.0	62.5	37.5	50.0	75.0	12.5

Appendix F

Reanalyses of Data with Questionnaire Threat Treated as a Random Factor

INTRODUCTION

As was noted in footnote 3 in Chapter 3 (pp. 58-59), there is some question as to whether perceived threat level of questionnaire should be treated as a random or fixed factor in the analyses of results of this study. Convincing arguments can be mounted on each side of the controversy. The present investigators have decided, for the purpose of this study, that perceived threat should be considered a random factor. All analyses, results, and recommendations presented in the body of this report have been based on that decision. The analyses presented in this appendix are for the reader who may feel that the more defensible choice would be to treat perceived threat as a fixed factor. Analysis of variance tables are presented below for each of the three analyses corresponding to Analyses 1, 2, and 3 in the body of the report. All table entries which were affected by the change of questionnaire perceived threat from random to fixed factor are included in the tables.

The columns included in the tables are as follows:

Source - source of variation
numerator - $MS_{between}$
df - degrees of freedom associated with numerator
denominator - MS_{within} associated with the particular source of variation
df - degrees of freedom associated with denominator
F - *F* ratio of numerator/denominator
p - level of significance
pooled - level of significance after pooling of terms in the denominator, where possible

In addition to these tables, Newman-Keuls tests and planned orthogonal contrasts have been recomputed to take into account the change of one of the factors from random to fixed. Those results are presented after each analysis of variance table.

TABLE F-1

Analysis of Variance Due
to Experimental Variables: Analysis 1

Source	Numerator	df	denominator	df	F	p	p.pooled
1. C (cover letter)	.6831	3	.1913	6	3.57	n.s.	< .05
2. F (follow-up)	.1230	2	.0378	4	3.25	n.s.	n.s.
3. S (stamp)	.2086	1	.1696	2	.51	n.s.	n.s.
4. L (length)	.6929	3	.3479	6	1.99	n.s.	n.s.
5. A (anonymity)	.1356	1	.0783	2	1.73	n.s.	n.s.
6. CF	.1696	6	.1929	12	.88	n.s.	n.s.
7. CS	.8827	3	.2265	6	3.90	n.s.	< .01
8. FS	.6213	2	.1740	4	3.57	n.s.	n.s.
9. CL	.1653	9	.3909	18	.42	n.s.	n.s.
10. FL	.1170	6	.1215	12	.96	n.s.	n.s.
11. SL	.6345	3	.4704	6	1.35	n.s.	n.s.
12. CA	.3341	3	.1761	6	1.90	n.s.	n.s.
13. FA	.4299	2	.3882	4	1.11	n.s.	n.s.
14. SA	.0367	1	.1890	2	.19	n.s.	n.s.
15. LA	.2548	3	.2731	6	.93	n.s.	n.s.
16. CFS	.5446	6	.2198	12	2.48	n.s.	< .05
17. CFL	.3021	18	.2496	36	1.21	n.s.	n.s.
18. CSL	.1567	9	.2663	18	.59	n.s.	n.s.
19. FSL	.2287	6	.2332	12	.98	n.s.	n.s.
20. CFA	.3307	6	.1310	12	2.52	n.s.	n.s.
21. CSA	.0720	3	.1497	6	.48	n.s.	n.s.
22. FSA	.0497	2	.3895	4	.13	n.s.	n.s.

TABLE F-1

Analysis of Variance Due to Experimental Variables: Analysis 1

Source	Numerator	df	denominator	df	F	p	p.pooled
23. CLA	.3322	9	.2995	18	1.11	n.s.	n.s.
24. FLA	.1142	6	.2431	12	.47	n.s.	n.s.
25. SLA	.0425	3	.1280	6	.33	n.s.	n.s.
26. CFSL	.1817	18	.2681	36	.68	n.s.	n.s.
27. CFSA	.1015	6	.2261	12	.44	n.s.	n.s.
28. CFLA	.3880	18	.3567	36	1.09	n.s.	n.s.
29. CSLA	.3795	9	.2456	18	1.54	n.s.	n.s.
30. FSLA	.2143	6	.0850	12	2.52	n.s.	n.s.
31. CFSLA	.2866	18	.2591	36	1.24	n.s.	n.s.

The cover letter was the only significant main effect (after pooling) in the mixed model, as shown above. Therefore, Newman-Keuls tests were performed only on that factor. The results were the same as obtained in Chapter 4 -- i.e., the comparison contributing most to the significant difference was between the typed personal appeal letter (41.4% response rate) and the form professional appeal letter (35.7%). The difference was significant at the .025 level. No other comparisons between two means were significantly different.

The results of planned orthogonal contrasts performed on the cover letter factor were identical to the results of the contrasts in the random effects model, since after pooling, the denominator of the *F*-ratio was essentially the same in both tests. Those results showed that both the typed letter and the personal appeal were more effective in producing higher response rates ($p < .05$).

The length factor was studied with planned orthogonal contrasts. The one-page, three-page contrast was not significant but the 20-item questionnaires were more effective than the 40-item questionnaires in eliciting higher response rates ($p < .05$). The significance level of this contrast had been .025 when the random effects model was used.

TABLE F-2

Analysis of Variance Due to Experimental Variables: Analysis 2

Source	Numerator	df	denominator	df	F	p	p.pooled
1. C	.6924	3	.1262	6	5.49	<.05	*
2. F	2.1491	2	.0599	4	35.878	<.005	*
3. S	.4592	1	.1890	2	2.43	n.s.	n.s.
4. L	.3666	3	.1416	6	2.59	n.s.	n.s.
5. A	.5000	1	.0488	2	10.25	n.s.	n.s.
6. CF	.3059	6	.1173	12	2.61	n.s.	n.s.
7. CS	.1936	3	.1526	6	1.27	n.s.	n.s.
8. FS	.9820	2	.2177	4	4.51	n.s.	<.025
9. CL	.2179	9	.4882	18	.45	n.s.	n.s.
10. FL	.0478	6	.4868	12	.10	n.s.	n.s.
11. SL	.0703	3	.4052	6	.17	n.s.	n.s.
12. CA	.0909	3	.1206	6	.75	n.s.	n.s.
13. FA	.0957	2	.4102	4	.23	n.s.	n.s.
14. SA	.5868	1	.7580	2	.77	n.s.	n.s.
15. LA	.5752	3	.4808	6	1.20	n.s.	n.s.
16. CFS	.4403	6	.2554	12	1.72	n.s.	n.s.
17. CFL	.3123	18	.2584	36	1.21	n.s.	n.s.
18. CSL	.5786	9	.2306	18	2.51	<.05	*
19. FSL	.2459	6	.1139	12	2.16	n.s.	n.s.
20. CFA	.1536	6	.1221	12	1.26	n.s.	n.s.
21. CSA	.0909	3	.1978	6	.46	n.s.	n.s.
22. FSA	.3791	2	.3414	4	1.11	n.s.	n.s.

TABLE F-2

Analysis of Variance Due
to Experimental Variables: Analysis 2

Source	Numerator	df	denominator	df	F	p	p.pooled
23. CLA	.1807	9	.0950	18	1.90	n.s.	n.s.
24. FLA	.2820	6	.3426	12	.82	n.s.	n.s.
25. SLA	1.0509	3	.1345	6	7.81	<.025	*
26. CFSL	.1367	18	.2173	36	.63	n.s.	n.s.
27. CFSA	.5325	6	.2339	12	2.28	n.s.	<.05
28. CFLA	.3303	18	.2706	36	1.22	n.s.	n.s.
29. CSLA	.3027	9	.1507	18	2.01	n.s.	n.s.
30. FSLA	.1158	6	.2547	12	.45	n.s.	n.s.
31. CFSLA	.2032	18	.2363	36	.86	n.s.	n.s.

* Factors and interactions which reached statistical significance prior to pooling were not pooled in this analysis.

Newman-Keuls tests were performed on the two main effects which were shown to have significant *F*-ratios above, cover letter and follow-up. The typed personal appeal cover letter was significantly different from (a) the form professional appeal letter ($p < .005$), (b) the typed professional appeal letter ($p < .025$), and (c) the form personal appeal letter ($p < .05$). No other comparisons were significant.

In the follow-up variable, the response rate achieved by a follow-up letter with a questionnaire enclosed was significantly different from the response rates achieved by both a follow-up postcard and no follow-up ($p < .005$ in both cases). There was no significant difference between follow-up postcard and no follow-up.

Planned orthogonal contrasts showed that a typed letter elicited a higher response rate than a form letter ($p < .025$), and a personal appeal yielded a better return rate than a professional appeal ($p < .005$).

On the length factor, planned orthogonal contrasts did not show a significant difference between one- and three-page questionnaires or between 20 and 40 items.

TABLE F-3

Analysis of Variance Due to Experimental Variables: Analysis 3

Source	Numerator	df	denominator	df	F	p	p.pooled
1. C	.6270	3	.1050	6	5.97	<.05	*
2. F	4.8127	2	.1311	4	36.71	<.005	*
3. S	.3648	1	.2717	2	1.34	n.s.	n.s.
4. L	.2734	3	.2219	6	1.23	n.s.	n.s.
5. A	.3301	1	.0104	2	31.74	<.05	*
6. CF	.3822	6	.1688	12	2.26	n.s.	n.s.
7. CS	.1582	3	.0911	6	1.74	n.s.	n.s.
8. FS	.8101	2	.2151	4	3.77	n.s.	<.05
9. CL	.1736	9	.4168	18	.42	n.s.	n.s.
10. FL	.0129	6	.4680	12	.03	n.s.	n.s.
11. SL	.1032	3	.5900	6	.17	n.s.	n.s.
12. CA	.1235	3	.1285	6	.96	n.s.	n.s.
13. FA	.0866	2	.3607	4	.24	n.s.	n.s.
14. SA	.6096	1	.5269	2	1.57	n.s.	n.s.
15. LA	.8347	3	.4803	6	1.74	n.s.	n.s.
16. CFS	.4316	6	.1973	12	2.19	n.s.	n.s.
17. CFL	.3166	18	.2741	36	1.16	n.s.	n.s.
18. CSL	.4915	9	.2289	18	2.15	n.s.	<.05
19. FSL	.2447	6	.1553	12	1.58	n.s.	n.s.
20. CFA	.2255	6	.1016	12	2.22	n.s.	n.s.
21. CSA	.0662	3	.1623	6	.41	n.s.	n.s.
22. FSA	.3296	2	.3934	4	.84	n.s.	n.s.

TABLE F-3

Analysis of Variance Due to Experimental Variables: Analysis 3

Source	Numerator	df	denominator	df	F	p	p.pooled
23. CLA	.2631	9	.1408	18	1.87	n.s.	n.s.
24. FLA	.2805	6	.3076	12	.91	n.s.	n.s.
25. SLA	1.0714	3	.1380	6	7.76	<.05	*
26. CFSL	.1915	18	.1925	36	.99	n.s.	n.s.
27. CFSA	.5658	6	.2524	12	2.24	n.s.	<.05
28. CFLA	.2916	18	.2466	36	1.18	n.s.	n.s.
29. CSLA	.3081	9	.1716	18	1.80	n.s.	n.s.
30. FSLA	.1769	6	.2272	12	.78	n.s.	n.s.
31. CFSLA	.1989	18	.2453	36	.81	n.s.	n.s.

* Factors and interactions which reached statistical significance prior to pooling were not pooled in this analysis.

As in the analysis shown in Table F-2, Newman-Keuls tests showed that the typed personal appeal cover letter was significantly different from (a) the form professional appeal letter ($p < .005$), (b) the typed professional appeal letter ($p < .025$), and (c) the form personal appeal letter ($p < .025$). No other comparisons were significant.

On the follow-up variable, the follow-up letter with questionnaire enclosed was significantly different from the follow-up postcard ($p < .005$) and from no follow-up ($p < .005$). The follow-up postcard was significantly different from no follow-up ($p < .005$).

The assurance of anonymity helped produce a significantly higher response rate ($p < .005$), according to the results of a Newman-Keuls test.

Planned orthogonal contrasts showed that a typed letter elicited a higher response rate than a form letter ($p < .005$), and a personal appeal elicited a higher response rate than a professional appeal ($p < .005$).

On the length factor, planned orthogonal contrasts did not show a significant difference between one- and three-page questionnaires or between 20 and 40 items.